

**SECTION 00 01 01
PROJECT TITLE PAGE
PORT OF TACOMA
TACOMA, WASHINGTON
MAINTENANCE MEZZANINE AND SHED HEATING**

**PROJECT NO. 101140.01
CONTRACT NO. 070735**

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Director, Engineering**

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Project Manager**

END OF PROJECT TITLE PAGE

THE UNDERSIGNED ENGINEER OF RECORD HEREBY CERTIFIES THAT THE TECHNICAL SPECIFICATIONS FOR THE FOLLOWING PORTIONS OF THIS PROJECT MANUAL WERE WRITTEN BY ME, OR UNDER MY DIRECT SUPERVISION, AND THAT I AM DULY REGISTERED UNDER THE LAWS OF THE STATE OF WASHINGTON, AND HEREBY AFFIX MY PROFESSIONAL SEAL AND SIGNATURE. THOSE SECTIONS PREPARED UNDER OR BY SUPERVISION AND BEING CERTIFIED BY MY SEAL AND SIGNATURE ARE AS FOLLOWS:

SEAL & SIGNATURE	SECTION(S)
 12/20/17	05 50 00
 4330 REGISTERED ARCHITECT SCOTT G. MILLER STATE OF WASHINGTON	06 10 00 07 21 00 08 11 13 10 10 00 08 33 23
 CHRISTOPHER ANDREW STATE OF WASHINGTON 36534 REGISTERED PROFESSIONAL ENGINEER 12-18-17	20 00 00 21 13 15 23 05 48 23 05 53 23 82 39 23 90 00
 CHARLES A. HEATON STATE OF WASHINGTON 33886 REGISTERED PROFESSIONAL ENGINEER 12-18-17	26 00 00 26 05 19 26 05 26 26 05 32 26 05 33 26 24 16 26 24 19 26 27 26 26 28 13 26 28 16 26 50 00

END OF SECTION

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26 05 19 Wires and Cables

26 05 26 - Grounding and Bonding for Electrical Systems

26 05 32 Outlet and Pull Boxes

26 05 33 Raceway

26 24 16 - Panelboards

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26 27 26 - Switches and Receptacles

26 28 13 - Fuses

26 28 16 Disconnects and Fused Switches

26 50 00 Lighting

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

A. Contract Drawings: The following two sets of drawings are a part of the Contract Documents:

Sheet No.	Drawing Title
	Maintenance Mezzanine
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A1.2	Mezzanine Floor Plan
A1.3	Mezzanine Elevation
S0.01	General Structural Notes
S1.01	Mezzanine Foundation Plan
S1.02	Mezzanine Framing Plan
M1.0	Mechanical, Legend, Details and Notes
M1.1	Mechanical, Demolition Plans
M1.2	Mechanical Floor Plans
FX1.1	Fire Protection Main Floor Plans
E0.1	Electrical Legend and Fixture Schedules
E1.1	Electrical Demolition Plan
E2.1	Lighting Floor Plan
E3.1	Power and Fire Alarm Floor Plan
	Maintenance Shed Heating
G1.1	Cover Sheet
A1.1	Shed Floor Plan
A1.2	Shed Elevation
M1.3	Mechanical Shed Plan
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PART 2 - PRODUCTS - NOT USED

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END OF LIST OF DRAWINGS

**THE PORT OF TACOMA IS CURRENTLY ACCEPTING SEALED BIDS FOR CONSTRUCTION OF
THE FOLLOWING:**

MAINTENANCE MEZZANINE AND SHED HEATING

PROJECT NO. 101140.01 | CONTRACT NO. 070735

- Scope of Work:** The work required for this project includes: Construction of a pre-engineered steel mezzanine with steel shelving inside of an existing building and associated electrical, lighting, fire protection, and architectural upgrades.
- Remodeling of an existing pre-engineered building with new insulation, heating, and electrical upgrades. Architectural improvements include two new roll up doors and sealing of gaps.
- Bid Estimate:** Estimated cost range is \$185,000 to \$230,000, plus Washington State Sales Tax (WSST).
- Sealed Bid Date/Time/ Location:** Bids will be received at the Front Reception Desk, Port Administration Office, One Sitcum Plaza, Tacoma, Washington until **2:00 P.M. on 01/31/2018**, at which time they will be publicly opened and read aloud.
- Pre-bid Conference and Site Tour:** A pre-bid conference and site visit have been set for 01/16/2018 at 10:00AM. The site visit will convene at the Port's Administrative building, located at One Sitcum Plaza. The following Personal Protective Equipment is required for the site visit: sturdy shoes, reflective vest, gloves, safety glasses, hearing protection, and hardhat.
- Bidding Security:** Each bid must be accompanied by a Certified Check or Bid Security Bond in an amount equal to five (5) percent of the bid.
- Contact Information:** All questions are to be put into writing to the Port at procurement@portoftacoma.com. No oral answers will be binding by the Port.

**Bidding
Documents:**

Plans, Specifications, Addenda, and Plan Holders List for this project are available on-line through The Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts"; "Procurement", and then the Procurement Number [070735]. Bidders must subscribe to the Holder's List on the right hand side of the screen in order to receive automatic email notification of future addenda and to be placed on the Holder's List.

Contact procurement@portoftacoma.com with questions. Holder's Lists will be updated regularly. Additional Instructions available in 00 21 00 - Instructions to Bidders.

END OF SECTION

PART 1 - SUMMARY

1.01 DEFINITIONS

- A. All definitions set forth in the Agreement, the General Conditions of the Contract for Construction and in other Contract Documents are applicable to the Bidding Documents.
- B. "Addenda" are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections. The contents of an Addendum are issued in no particular order and therefore should be carefully and completely reviewed.

An "Additive Bid" (or "Additive") is an amount stated in the Bid to add specified features of the work.
- C. An "Alternate Bid" (or "Alternate") is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- D. "Award" means the formal decision by the Port of Tacoma ("Port") notifying a Responsible Bidder with the lowest responsive Bid of the Port's acceptance of the Bid and intent to enter into a Contract with the Bidder.
- E. The "Award Requirements" include the statutory requirements as a condition precedent to Award.
- F. The "Base Bid" is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in Alternate Bids.
- G. A "Bid" is a complete and properly signed proposal to do the Work, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.
- H. The "Bid Date" is the day and hour specified in the Bidding Documents, as may be changed through an Addendum, by which Bidders are required to submit Bids to the Port.
- I. The "Bid Form" is the form(s) included with the Bidding Documents, with Specification Section 00 41 00, through which a Bidder submits a Bid.
- J. A "Bidder" is a person or entity who submits a Bid.
- K. The "Bidding Documents" include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, any other sample bidding and contract forms, the Bid Bond, and the proposed Contract Documents, including any Addenda issued prior to the Bid Date.
- L. The "Contract Documents" proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special or other Conditions included in the project manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- M. The "Schedule of Unit Prices" is a separate schedule on the Bid Form for Unit Pricing as an all-inclusive price per unit of measurement for materials, equipment or services as described in the Bidding Documents or in the proposed Contract Documents for the optional use of the Port. Quantities are not predictions of amounts anticipated. The Port may but is not obligated to accept a Schedule of Unit Price if it accepts the Base Bid. The Schedule of Unit Prices are not factored into the evaluation of determining the low bid amount and are not included as part of the bid award amount.

- N. A "Sub-Bidder" is a person or entity of any tier who submits a bid or proposal to or through the Bidder for materials, equipment or labor for a portion of the Work.

1.02 BIDDER'S REPRESENTATIONS

- A. By making its Bid, each Bidder represents that:
- B. BIDDING DOCUMENTS. The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.
- C. PRE-BID MEETING. The Bidder has attended pre-Bid meeting(s) required by the Bidding Documents. Attendance at a mandatory meeting or training session means that, in the sole opinion of the Port, a Project representative of a prospective Bidder has attended all or substantially all of such meeting or session.
- D. BASIS. Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, and is made without exception.
- E. EXAMINATION. The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents (including, but not limited to, any liquidated damages and insurance provisions), and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed and has correlated its observations with the requirements of the proposed Contract Documents and it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Bidder fully to acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.
- F. PROJECT MANUAL. The Bidder has checked its copies of the project manual (if any) with the table of contents bound therein to ensure the project manual is complete.
- G. SEPARATE WORK. The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications with any other contracts to be awarded separately from, but in connection with, the Work being Bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the Contract being Bid upon.
- H. LICENSE REQUIREMENTS. Bidders and Sub-Bidders shall be registered and shall hold such licenses as may be required by the laws of Washington, including a certificate of registration in compliance with RCW 18.27, for the performance of the Work specified in the Contract Documents.
- I. NO EXCEPTIONS. Bids must be based upon the materials, systems and equipment described and required by the Bidding Documents, without exception.

1.03 BIDDING DOCUMENTS

- A. COPIES

1. Bidders may obtain complete sets of the Bidding Documents from The Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts" then "Procurement".
2. Complete Sets. Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for obtaining updated information. The Port does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents.
3. Conditions. The Port makes copies of the Bidding Documents available only for the purpose of obtaining Bids on the Work and does not confer a license or grant permission for any other use.
4. Legible Documents. To the extent any Drawings, Specifications, or other Bidding Documents are not legible, it is the Bidder's responsibility to obtain legible documents.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. Format. The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in or phases of the Project.
2. Duty to Notify. Bidders shall promptly notify the Port in writing of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions.
3. Products and Installation. All Bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Port any objections (in writing) no later than seven (7) days prior to the Bid Date. The submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.
4. Written Request. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written email request to procurement@portoftacoma.com at least seven (7) days prior to the Bid Date.
5. Request to Modify Responsibility Criteria. No later than seven (7) days prior to the Bid Date, a potential Bidder may request in writing that the Port modify the Responsibility Criteria. The Port will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the Criteria, the Port will issue an Addendum identifying the new Criteria.
6. Addenda. The Bidder shall not rely on oral information provided at any pre-Bid meetings or during site visits. Verbal statements made by representatives of the Port are for informational purposes only. Any interpretation, correction or change of the Bidding Documents will be made solely by written Addendum. Interpretations, corrections or changes of the Bidding Documents made in any manner other than by written Addendum, including but not limited to oral statements, will not be binding, and Bidders shall not rely upon such statements, interpretations, corrections or changes. The Port is not responsible for explanations or interpretations of the Bidding Documents other than in a written Addendum.
7. Site Visits. Any site visits are provided as a courtesy to potential Bidders to assist them in becoming familiar with the Project site conditions. However, only the Bidding Documents, including any issued Addenda, may be relied upon by Bidders.

8. Singular References. Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.
9. Utilities and Runs. The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.

C. SUBSTITUTIONS

1. For substitutions during bidding, refer to Section 00 26 00 - Substitution Procedures During Bidding.

D. ADDENDA

1. Distribution. All Addenda will be written and will be made available on the Port's website or any other source specified by the Port for the Project.
2. Copies. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. Verification and Acknowledgment of Receipt. Prior to submitting a Bid, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt and consideration of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. Form. Bids (including required attachments) shall be submitted on forms identical to the Bid Form included with the Bidding Documents. No oral, email, or telephonic responses or modifications will be considered.
2. Entries on the Bid Form. All blanks on the Bid Form shall be filled in by typewriter, printer, or manually in ink.
3. Figures. All sums shall be expressed in figures, not words. Portions of the Bid Form may require the addition or multiplication of components bids to a total or the identification of component amounts within a total. In case of discrepancy between unit prices listed and their sum(s), the unit prices listed shall govern (rather than the sum).
4. Initial Changes. Any interlineation, alteration or erasure shall be initialed by an authorized representative of the Bidder.
5. Bid Breakdown. The Bid Form may contain, for the Port's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.
 - a. For lump sum bids the total Contract Sum shall be submitted.
 - b. For unit price bids a price shall be submitted for each item of the Work, an extension thereof, and, if requested, the total Contract Sum.
6. Alternates. All Alternates should be Bid. The Port reserves the right, but is not obligated, to reject any Bid on which all requested Alternates are not Bid. If no change in the Base Bid is required for an Alternate, enter "Zero" or "0." If there is no entry, the Bidder will be presumed to have made no offer to perform the Alternate. If it is not otherwise clear from the Bid or the nature of the Alternate, it will be presumed that the amount listed for an Alternate is additive rather than deductive.

7. Schedule of Unit Prices. All Unit Prices under this schedule shall be bid. The Port reserves the right, but is not obligated to, reject any Bid on which all requested Schedule of Unit Prices are not bid.
8. No Conditions. The Bidder shall make no conditions or stipulations on the Bid Form nor qualify its Bid in any manner.
9. Identity of Bidder. The Bidder shall include in the specified location on the Bid Form the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. The Port verifies signature authority on the Labor and Industries website <https://fortress.wa.gov/lni/bbip/Search.aspx> under the contractor registration business owner information. If the business owner information is not current the bidder shall show proof of authority to sign at the request of the Port. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder
10. Bid Amounts Do Not Include Sales Tax. The Work to be performed constitutes a "retail sale" as this term is defined in RCW 82.04.050. Thus, the Base Bid amount shall include in the sum stated all taxes imposed by law, EXCEPT WASHINGTON STATE AND LOCAL SALES TAX. The engaged Contractor will pay retail sales tax on all consumables used during the performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Base Bid price and in any other prices set forth on the Bid Form. The Port will pay state and local retail sales tax on each progress payment and final payment to the engaged Contractor for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local government.

B. POTENTIAL LISTING OF SUB-BIDDERS (SUBCONTRACTORS)

1. Procedure. On certain projects of the Port, the Bid Form includes a requirement that certain Sub-Bidders be listed, in which case the Bidder must complete the required list. In these circumstances, and regardless of the anticipated cost of the Project, the Bidder must name the Sub-Bidder or Sub-Bidders with whom the Bidder, if Awarded the Contract, will subcontract directly (i.e., not lower-tier Sub-Bidders) for performance of the Work of:
 - a. HVAC (heating, ventilation and air conditioning) Work,
 - b. plumbing Work as described in RCW 18.106,
 - c. electrical Work as described in RCW 19.28, and
 - d. any other categories of Work listed on the Sub-Bidder listing form and/or Bid Form.
2. Self-Performance: If the Bidder intends to self-perform any of these categories of Work, it must name itself for each such category of Work.
3. Multiple Entries: The Bidder shall not list more than one (1) entity for a particular category of Work identified, unless a Sub-Bidder will vary based on an Alternate Bid, in which case the Bidder shall identify the Sub-Bidder to be used for the Alternate and the affected portion of the Work.
4. Failure to Submit: In accordance with RCW 39.30.060, failure of a Bidder to submit as part of the Bid the names of such proposed HVAC, plumbing, and electrical Sub-Bidders or to name itself to perform such Work or the naming of two or more Sub-Bidders to perform the same Work shall render the Bidder's Bid non-responsive and, therefore, void.
5. Requirement to Subcontract: The Bidder, if Awarded the Contract, will subcontract with the listed Sub-Bidders for performance of the portion of the Work designated on the Bid Form,

subject to the provisions of the Contract for Construction and RCW 39.30.060. The Bidder shall not substitute a listed Sub-Bidder in furtherance of bid shopping or bid peddling.

6. Sub-Bidder Qualification: Listed Sub-Bidders may be required to provide evidence of their qualifications, including a statement of experience and references, prior to Award, or at any time during the Contract Time. Such information shall be provided within 24 hours of request. This evidence shall demonstrate that the Sub-Bidder meets or exceeds all requirements for experience, qualifications, manufacturer's certifications, or any other requirements specified in any of the technical sections of the Contract Documents for which the Sub-Bidder proposes to perform Work.
7. Replacement: If a listed Sub-Bidder fails to provide adequate evidence of qualifications, is unable to comply with any bonding requirements of the Bidding Documents or with other requirements of the Contract or Bidding Documents, is not properly licensed, or fails to meet the Responsibility Criteria of the Bidding Documents, the Port may require the Bidder to replace the Sub-Bidder with another subcontractor reasonably acceptable to the Port at no change in the Contract Sum or Contract Time.
8. Sub-Bidder Standards: Sub-Bidders shall meet contractual and technical qualification standards, and provide specialized certification, licensing, and/or payment and performance bonding, if required.
9. Small business participation encouraged: The Port's policy is to encourage the Contractor to solicit and document participation, and to provide and promote the maximum lawful, practicable opportunity for increased participation, by small business enterprises.

C. BID SECURITY

1. Purpose and Procedure. Each Bid shall be accompanied by Bid security payable to the Port in the form required by the Bidding Documents and equal to five percent (5%) of the Base Bid only (i.e., not including any Alternates or Unit Prices). The Bid security constitutes a pledge by the Bidder to the Port that the Bidder will enter into the Contract with the Port in the form provided, in a timely manner, and on the terms stated in its Bid, and will furnish in a timely manner the payment and performance bonds, certificates of insurance, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the Bid security shall be forfeited to the Port as liquidated damages, not as a penalty. By submitting a Bid, each Bidder represents and agrees that the Bid security, if forfeited, is a reasonable prediction on the Bid Date of future damages to the Port.
2. Form. The Bid security shall be in the form of a certified or bank cashier's check payable to the Port or a Bid bond executed by a bonding company reasonably acceptable to the Port licensed in the State of Washington, registered with the Washington State Insurance Commissioner, possess and A.M. Best rating of "A minus, Fiscal Size Category (FSC) (6) or better and be authorized by the U.S. Department of the Treasury. The Bid security shall be signed by the person or persons legally authorized to bind the Bidder. Bid bonds shall be submitted using the form included with the Bidding Documents.
3. Retaining Bid Security. The Port will have the right to retain the Bid security of Bidders to whom an Award is being considered until the earliest of either (a) mutual execution of the Contract, and the Port's receipt of payment and performance bonds, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) when all Bids have been rejected.
4. Return of Bid Security. Within sixty (60) days after the Bid Date, the Port will release or return Bid securities to Bidders who's Bids are not to be further considered in Awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has

been finally executed, after which all unforfeited Bid securities will be returned. Bid security may be returned in the form provided or by separate payment.

D. SUBMISSION OF BIDS

1. Procedure. The Bid, the Bid security, and other documents required to be submitted with the Bid shall be enclosed in a sealed envelope identified with the Project name and number and the Bidder's name and address. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face of the mailing envelope.
 - a. If a Bid is mailed, it shall be addressed to the Port of Tacoma, Contracts Department, One Sitcum Plaza, Tacoma, WA 98421.
 - b. If a Bid is delivered, it shall be delivered to the Front Reception Desk, Port of Tacoma, One Sitcum Plaza, Tacoma, WA 98421.
 - c. The time stamp clock at the Front Reception Desk at One Sitcum Plaza is the Port's official clock.
2. Deposit. Bids shall be deposited at the designated location prior to the Bid Date indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the Bid Date and time specified shall be returned without consideration at the discretion of the Port or rejected at the time of receipt.
3. Delivery. The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.
4. Form. Oral, facsimile, telephonic, electronic, or email Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. After the Bid Date. A Bid may not be modified, withdrawn or canceled by the Bidder during a sixty (60) day period following the Bid Date, and each Bidder so agrees by virtue of submitting its Bid.
2. Before the Bid Date. Prior to the Bid Date, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. The notice shall be in writing with the signature of the Bidder and shall be worded so as not to reveal the amount of the original Bid. Email notice will not be accepted. It shall be the Bidder's sole responsibility to verify that the notice has been received by the Port in time to be withdrawn before the Bid opening.
3. Resubmittal. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
4. Bid Security with Resubmission. Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

F. COMMUNICATIONS

1. Communications from a Bidder related to these Instructions to Bidders must be in writing to procurement@portoftacoma.com. Communications, including but not limited to notices and requests, by Sub-Bidders shall be made through the Bidder and not directly by a Sub-Bidder to the Port.

1.05 CONSIDERATION OF BIDS

- A. **OPENING OF BIDS:** Unless stated otherwise in the Advertisement or Invitation to Bid or an Addendum, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and any Alternate Bids will promptly (and generally within 24 hours) be made available to Bidders and other interested parties.
- B. **REJECTION OF BIDS:** The Port shall have the right but not the obligation to reject any or all Bids for any reason or for no reason, to reject a Bid not accompanied by the required Bid security, or to reject a Bid which is in any way incomplete or irregular.
- C. **BIDDING MISTAKES:** The Port will not be obligated to consider notice of claimed Bid mistakes received more than 24 hours after the Bid Date. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from Bidding on the Project if a subsequent call for Bids is made for the Project.
- D. **ACCEPTANCE OF BID (AWARD)**
 - 1. **Intent to Accept.** The Port intends (but is not bound) to Award a Contract to the Responsible Bidder with the lowest responsive Bid, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Port has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.
 - 2. **Alternates.** The Port shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Contract or Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates (if any) accepted. Failure to submit Bids on all Alternates may be cause for rejecting the Bidder's entire Bid. The Port retains the right to accept Alternate Bid items at the price Bid within sixty (60) days after the Contract is executed.
 - 3. **Requirements for Award.** Before the Award, the lowest responsive Bidder must be deemed Responsible by the Port and must satisfy all Award Requirements.
- E. **BID PROTEST PROCEDURES**
 - 1. **Procedure.** A Bidder protesting for any reason the Bidding Documents, a Bidding procedure, the Port's objection to a Bidder or a person or entity proposed by the Bidder, including but not limited to a finding of non-Responsibility, the Award of the Contract or any other aspect arising from or relating in any way to the Bidding shall cause a written protest to be filed with the Port within two (2) business days of the event giving rise to the protest. (Intermediate Saturdays, Sundays, and legal holidays are not counted as business days.) The written protest shall include the name of the protesting Bidder, the bid solicitation number and title under which the protest is submitted, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, evidence that the apparent low bidder has been given notice of the protest, and the specific relief requested. The written protest shall be sent by email to procurement@portoftacoma.com.
 - 2. **Consideration.** Upon receipt of the written protest, the Port will consider the protest. The Port may, within three (3) business days of the Port's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Port, the Contracts Director of the Port or his or her designee will review the issues and promptly furnish a final and binding written decision to the protesting Bidder and any other affected Bidder(s) within six (6) business days of the Port's receipt of the protest. (If more than one (1) protest is filed, the Port's decision will be provided within six (6) business days of the Port's receipt

of the last protest.) If no reply is received from the Port during the six (6) business-day period, the protest will be deemed rejected.

3. Waiver. Failure to comply with these protest procedures will render a protest waived.
4. Condition Precedent. Timely and proper compliance with and exhaustion of these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST BID INFORMATION

A. THE LOWEST RESPONSIVE BIDDER SHALL:

1. Responsibility Detail Form. Within 24 hours of the Low Responsive Bidder Selection Notification, the apparent low Bidder shall submit to the Port the Responsibility Detail Form and Project Example Sheets (Section 00 45 13) executed by an authorized company officer. As requested from the Port, the low, responsive Bidder shall provide written confirmation that the person signing the Bid on behalf of the Bidder was duly authorized at the time of bid, a detailed breakdown of the Bid in a form acceptable to the Port, and other information required by the Port.
2. Within ten (10) days after the Port's Notice of Award of the Contract, the apparent low Bidder shall also submit to the Port:
 - a. additional information regarding the use of the Bidder's own forces and the use of subcontractors and suppliers;
 - b. the names of the persons or entities (including a designation of the Work to be performed with the Bidder's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work (i.e., either a listed Sub-Bidder or a Sub-Bidder performing Work valued at least ten percent (10%) of the Base Bid), consistent with the listing required with the Bid; and
 - c. the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work.
3. Failure to provide any of the above information in a timely manner will constitute an event of breach permitting forfeiture of the Bid security.
4. Bidder Responsibility. The Bidder will be required to establish to the satisfaction of the Port the reliability and Responsibility of itself and the persons or entities proposed to furnish and perform the Work described in the Bidding Documents. If requested, the Bidder shall meet with the Port to discuss the Bid, including any pricing, the Bid components, and any assumptions made by the Bidder.
5. Objection. Prior to an Award of the Contract, the Port will notify the Bidder in writing if the Port, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder. Upon receiving such objection, the Bidder may, at Bidder's option, (1) withdraw their Bid, (2) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by such substitution, or (3) file a protest in accordance with the Bidding Documents.
6. Change. Persons and entities proposed by the Bidder to whom the Port has made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Port.

7. Right to Terminate. The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. If a Bidder makes a material misrepresentation on a Qualification Statement, the Port has the right to terminate the Contract for cause and may then pursue any remedies that exist under the Contract or that are otherwise available.

- B. INFORMATION FROM OTHER BIDDERS: All other Bidders designated by the Port as under consideration for Award of a Contract shall also provide a properly executed Qualification Statement, if so requested by the Port.

1.07 PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT BOND, AND INSURANCE

- A. BOND REQUIREMENTS: Within ten (10) days after the Port's Notice of Award of the Contract, the successful Bidder shall obtain and furnish statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. The cost of such bonds shall be included in the Base Bid.
- B. TIME OF DELIVERY AND FORM OF BONDS: The successful Bidder shall deliver an original copy of the required bonds to the Port, 1 Sitcum Plaza, Tacoma, WA 98421, within the time specified in the Contract Documents.
- C. INSURANCE: a certificate of insurance from the Bidder's insurance company that meets or exceeds all requirements of the Contract Documents;
- D. GOVERNMENTAL REQUIREMENTS: Notwithstanding anything in the Bidding or Contract Documents to the contrary, the Bidder shall provide all bonding, insurance and permit documentation as required by governmental authorities having jurisdiction for any portions of the Project.

1.08 FORM OF AGREEMENT

- A. FORM TO BE USED: The Contract for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental or Special Conditions, and the other Contract Documents included with the project manual.
- B. CONFLICTS: In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.
- C. CONTRACT DELIVERY. Within ten (10) days after Notice of Award, the Bidder shall submit a signed Contract to the Port in the form tendered to the Bidder and without modification.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplementary Conditions, and Division 0 and 1 Specifications sections shall apply to all sections of the Contract Documents, including specifications, drawings, addenda, or other changes of documents issued for bidding.

1.02 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions during bidding.

1.03 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. The bidding documents include performance specifications for products and equipment which meet project requirements. In those cases where a representative item or manufacturer is named in the specification, it is provided for the sole purpose of identifying a product meeting the required functional performance, and where the words "or equal" are used, a substitution request as further described, is not required.
- C. Where non-competitive or sole source products or manufacturers are explicitly specified with the words "or approved equal", or "Engineer approved equal", or "as approved by the Engineer" are used, they shall be taken to mean "or approved equal". In these cases a substitution request as further described in this section, is required.

1.04 SUBMITTALS

- A. Pre-Bid Substitution Requests: Submit one PDF of the substitution request form along with all supporting documentation for consideration of each request. Identify product or fabrication or installation method to be replaced. Include Drawing numbers and titles. Substitution requests prior to bid date may originate directly from a prime bidder, or from a prospective supplier or subcontractor.
 - 1. Substitution Request Form: Use copy of form located in Section 00 43 25.
 - 2. Documentation: Show compliance with requirements for substitutions with the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. Certificates and qualification data, where applicable or requested.
 - f. Research reports evidencing compliance with building code in effect for project
 - 3. Engineer's Action: Engineer will review substitution requests if received electronically to procurement@portoftacoma.com at least 7 days prior to the bid opening date set forth in these documents. Substitution requests received after this time will not be reviewed.

- a. Forms of Acceptance: Substitution requests will be formally accepted via written addendum prior to the bid opening date. Bidders shall not rely upon approvals made in any other manner.
 - b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.
 - c. The Port's decision of approval or disapproval of a proposed substitution shall be final.
- B. Substitutions will not be considered when:
- 1. Indicated or implied on shop drawings or product data submittals without formal request submitted in accordance with this Section.
 - 2. Acceptance will require substantial revision of Contract Documents or other items of the Work.
 - 3. Submittal for substitution request does not include point-by-point comparison of proposed substitution with specified product.

1.05 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 EXISTING CONDITIONS

- A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of the Contract Documents, as follows:
- B. Site Drawings: Entitled Maintenance Shop Remodel 1990, dated 1990 and Equipment and Facilities Maintenance Building Architectural Drawings (3 volumes), dated 1975.

1.02 AVAILABILITY

- A. Reference Documents are available on-line through The Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts"; "Procurement", and then the Procurement Number.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section provides the notification required for disclosure of asbestos, lead-containing or other hazardous materials.

1.02 HAZARDOUS MATERIALS NOTICE

- A. The Port is reasonably certain that asbestos and lead will not be disturbed by the project. If the Contractor encounters material suspected of containing lead or asbestos which will interfere with the execution of the work, the Contractor shall stop work and notify the Engineer.

1.03 NOTIFICATION AND SUSPENSION

- A. In the event the Contractor detects the presence of potentially contaminated materials not previously identified in this specification, the Contractor shall immediately notify the Port. Following such notification by the Contractor, the Port shall in turn notify the various governmental and regulatory agencies concerned with the presence of potentially contaminated materials, if warranted. Depending upon the type of contaminated materials identified, the Port may suspend work in the vicinity of the discovery under the provisions of General Conditions.
- B. Following completion of any further testing necessary to determine the nature of the materials involved, the Port will determine how the material shall be managed. Although the actual procedures used in resuming the work shall depend upon the nature and extent of the potentially contaminated material, the following alternate methods of operation are foreseen as possible:
 - 1. Contractor to resume work as before the suspension.
 - 2. Contractor to move its operations to another portion of the work until measures to eliminate any hazardous conditions can be developed and approved by the appropriate regulatory agencies.
 - 3. The Port to direct the Contractor to dispose or treat the material in an approved manner.
 - 4. The Port to terminate or modify the Contract.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

BIDDER'S NAME:

1.01 PROJECT TITLE: MAINTENANCE MEZZANINE AND SHED HEATING

The undersigned bidder declares that it has read the specifications, understands the conditions, has examined the site, and has determined for itself all situations affecting the work herein bid upon. Bidder proposes and agrees, if this proposal is accepted, to provide at bidder's own expense, all labor, machinery, tools, materials, etc., including all work incidental to, or described or implied as incidental to such items, according to the contract documents of the port of Tacoma, and that the bidder will complete the work within the time stated, and that bidder will accept in full payment therefore the lump sum or unit price(s) set forth below:

Proposed bid price. (note: show prices in figures only.) Complete installation:

ITEM NO.	DESCRIPTION OF ITEM	QTY	UOM	UNIT PRICE	EXTENDED PRICE
1	Mobilization and Demobilization	1	LS		
2	Project Administration	1	LS		
3	Furnish Mezzanine	1	LS		
4	Install Mezzanine	1	LS		
5	Architectural Modification - Main Building	1	LS		
6	Electrical Work - Main Bldg.	1	LS		
7	Mechanical Work - Main Bldg.	1	LS		
8	Fire Protection Work	1	LS		
9	Architectural Modification - Shed	1	LS		
10	Electrical Work - Shed	1	LS		
11	Mechanical Work - Shed	1	LS		
12	Project Closeout	1	LS		

TOTAL BID AMOUNT	
------------------	--

Evaluation of bids. In accordance with the provisions of these contract documents, bids will be evaluated to determine the lowest base bid subtotal offered by a responsible bidder submitting a responsive bid.

Schedule of unit prices. The following unit prices are proposed to apply only in the event of additions to or deletions from the work required and ordered. All prices shall include complete installation without Washington state sales tax. The bidder shall propose a price for each item; failure to propose a price for each item may render the bid non-responsive. The port reserves the right to accept or reject the unit prices proposed.

Progress payment retention. In accordance with RCW 60.28.011, the undersigned elects that, during the life of the contract, the money withheld from contract progress payments be retained as indicated below. Failure to indicate a choice shall be construed as approval of item (a).

A. Retained percentages will be retained by the port in a fund; or _____
(initials)

B. Deposited by the port in an interest-bearing account in a bank, mutual savings bank or savings and loan association; or _____
(initials)

I. _____
(name of bank, mutual savings bank or S&L assoc.)

II. _____
(address)

C. Placed in escrow with a bank or trust company; or _____
(initials)

I. _____
(name of financial institution)

II. _____
(address)

III. _____
(type of security)

D. Retainage bond in an amount equal to 5% of the contract sum plus change orders. _____

The retainage bond shall be based on the form furnished in section 00 61 23 or otherwise acceptable to the port and duly completed and signed by a licensed surety or sureties registered with the Washington state insurance commissioner and on the currently authorized insurance list published by the Washington state insurance commissioner. The surety or sureties must be rated at least a minus, fsc(6), or higher by a.m. best rating guide and be authorized by the federal department of the treasury. Attorneys-in-fact who sign the retainage bond must file with each bond a certified and effective power of attorney statement. (initials)

Note: accounts and deposits made under items (b) and (c), above, must be in a bank which is listed on the state of Washington public depositaries current list.

Trench excavation safety provision. If the bid amount contains work which requires trenching exceeding a depth of 4 feet, all costs for trench safety shall be included in the base bid and indicated below for adequate trench safety systems in compliance with RCW 39.04 and WAC 296-155-650. Bidder shall include a lump sum amount, excluding Washington state sales tax. If trench excavation safety provisions do not pertain to the work, the bidder should enter "N.A." or "not applicable" in the blank on the bid form.

Addenda. Bidder acknowledges review of all addenda through no. _____

Bid security. A certified check, cashier's check, or other obligation of a bank, or a bid security bond in substantially the form set forth in section 00 43 13, bid security form for at least 5% of the total bid without sales tax, accompanies this bid.

Noncollusion. The undersigned declares under penalty of perjury that the bid submitted is a genuine and not a sham or collusive bid, or made in the interest or on behalf of any person or firm not therein named; and further says that the said bidder has not directly or indirectly induced or solicited any bidder on the above work or supplies to put in a sham bid, or any other person or corporation to refrain from bidding; and that said bidder has not in any manner sought by collusion to secure to the bidder an advantage over any other bidder or bidders.

NAME OF FIRM

DATE

SIGNATURE

BY

TITLE

MAILING ADDRESS

CITY, STATE

ZIP CODE

TELEPHONE NUMBER

EMAIL ADDRESS

WA STATE CONTRACTOR'S LICENSE NO.

DATE OF ISSUE
EXPIRATION DATE

UNIFIED BUSINESS IDENTIFIER (UBI) NO.

EMPLOYMENT SECURITY
DEPARTMENT NO.

identification of contractor as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity

END OF SECTION

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the PORT OF TACOMA as Obligee, in the penal sum of _____ Dollars, for the payment of which the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigned, jointly and severally, by these present.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for _____, according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for the faithful performance thereof, with Surety or Sureties approved by the Obligee; or, if the principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ day of _____, 20____

BY _____
Principal

BY _____
Surety

Agent and Address

Note: Bidder may submit Surety's bid bond form, provided it is similar in substance, made out in the name of the Port of Tacoma, and that the agent's name and address appear as specified. Bonds containing riders limiting responsibility for toxic waste or limiting the term of responsibility will be rejected.

END OF SECTION

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS
SECTION 00 43 25 – SUBSTITUTION REQUEST FORM – DURING BIDDING

Project Title _____

Project No. _____

Submitted By: _____

Contract No. _____

Prime/Sub/Supplier: _____

Date: _____

Specification Title: _____

Section No. _____

Description: _____

Paragraph: _____

Page No. _____

Proposed Substitution: _____

Trade Name: _____

Model No.: _____

Manufacturer: _____

Address: _____

Phone No.: _____

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted By: _____

Signed By: _____ Firm: _____

Address: _____

Telephone: _____ Email: _____

Supporting Data Attached:

☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other _____

ENGINEER'S REVIEW AND ACTION

- ☐ Substitution approved
- ☐ Substitution approved as noted
- ☐ Substitution rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

The low responsive Bidder shall be required to complete this Responsibility Detail Form as specified in Section 00 21 00 – Instructions to Bidders. **This completed Responsibility Detail Form shall be submitted electronically (pdf) via email to the Contact(s) identified in the Low Responsive Bidder Selection Notification. THIS IS NOT TO BE SUBMITTED WITH A BID.**

Bidder's Company Name: _____

For the below Mandatory Bidder Responsibility Criteria, please check the appropriate box.

1.0 MANDATORY BIDDER RESPONSIBILITY CRITERIA

- A. The Bidder shall meet the following mandatory responsibility criteria as described in RCW 39.04.350(1). The Bidder shall be rejected as not responsible if any answer to questions 1 through 5 is "No" or any answer to questions 6 through 8 is "Yes".

1. Does the Bidder have a Certificate of Registration in compliance with RCW 18.27?

☐ Yes ☐ No

2. Does the Bidder have a current Washington State Unified Business Identifier number?

☐ Yes ☐ No

3. Does the Bidder have Industrial Insurance Coverage for the Bidder's employees working in Washington State as required in RCW 51?

☐ Yes ☐ No

4. Does the Bidder have an Employment Security Department number as required in RCW 50?

***Attach letter dated within 6 months of bid opening date.**

**Request a letter electronically by clicking on the following link <https://fortress.wa.gov/esd/twt/pwcinternet/> or by emailing a request to publicworks@esd.wa.gov . .*

☐ Yes ☐ No

5. Does the Bidder have a Washington State Excise Tax Registration number as required in RCW 82?

☐ Yes ☐ No

6. Has the Bidder been disqualified from bidding on any public works project under RCW 39.06.010 or 39.12.065(3)?

☐ Yes ☐ No

7. Has the Bidder violated RCW 39.04.370 more than one time as determined by the Washington State Department of Labor and Industries?

☐ Yes ☐ No

8. Has the Bidder ever been found to be out of compliance with Apprenticeship Utilization requirements of RCW 39.04.320?

☐ Yes ☐ No

9. Has the Bidder ever been found to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW within the three-year period immediately preceding the date of this bid solicitation?

☐ Yes ☐ No

If any answer to questions 1 through 5 is "No" or any answer to questions 6 through 9 is "Yes" - **STOP HERE** and contact the Contract Administrator. The Bidder is not responsible for this Work. Otherwise proceed to 1.1. **Provide attached to this completed form documentation to confirm responsibility criteria.**

For remaining criteria below, check or fill-out the appropriate box. Based upon the answer provided by the Bidder, the Port may request additional information or seek further explanation. As needed, provide backup documentation for any explanations listed below.

1.1 CONTRACT AND REGULATORY HISTORY

- A. The Port will evaluate whether the Bidder's contract and regulatory history demonstrates an acceptable record of past project performance and consistent responsibility. The Bidder shall answer the following questions. The Bidder may be rejected as not responsible if any answer to questions 1 through 5 below is "Yes".

1. Has the Bidder had a contract terminated for cause or default, in the last 5 years?

☐ Yes ☐ No **If YES, explain below.**

2. Has the Bidder required a Surety to take over all, or a portion of, a project to cure or respond to an asserted default or material breach of contract on the part of the Bidder on any public works project, in the last 5 years?

☐ Yes ☐ No **If YES, explain below.**

3. Have the Bidder and major Sub-Bidders been in bankruptcy, reorganization and/or receivership on any public works project, in the last 5 years?

☐ Yes ☐ No **If YES, explain below.**

4. Have the Bidder and major Sub-Bidders been disqualified by any state or local agency from being awarded and/or participating on any public works project, in the last 5 years?

☐ Yes ☐ No **If YES, explain below.**

5. Are the Bidder and major Sub-Bidders currently a party to a formal dispute resolution process with the Port—i.e., a pending mediation, arbitration or litigation.

☐ Yes ☐ No **If YES, explain below.**

1.2 ACCIDENT/INJURY EXPERIENCE

- A. The Port will evaluate the Bidder's accident/injury Experience Modification Factor ("EMF") from the Washington State Department of Labor and Industries to assess whether the Bidder has an acceptable safety record preventing personal injuries on projects.
- B. List the Bidder's accident/injury EMF for the last five (5) years. An experience factor is calculated annually by the Washington State Department of Labor and Industries.

Year	Effective Year	Experience Factor
1		
2		
3		
4		
5		

If the Bidder has received an EMF of greater than 1.0 for any year, explain the cause(s) of the designation and what remedial steps were taken to correct the EMF. The Bidder may be rejected as not responsible if the Bidder's EMF is greater than 1.0 and sufficient remedial steps have not been implemented.

1.3 WORK PERFORMED BY BIDDER

- A. The Bidder shall state the amount of the Contract Work, as an equivalent to the Total Bid Price, excluding taxes, insurance and bonding, the Bidder will execute with its own forces.

_____ %

1.4 SUBCONTRACTOR VERIFICATION

- A. The Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and 39.04.350.
1. Bidder shall verify major subcontractors meet the responsibility criteria required. Fill out one Port of Tacoma Public Works Project Bidder Evaluation Checklist for Subcontractors for each major subcontractor and submit to the Port with this form. Backup documentation is not required to be submitted.

1.5 PROJECT EXAMPLE SHEETS

- A. As part of completing this Responsibility Detail Form, **submit the following information with the completed Responsibility Detail Form:**
1. Bidder's recent job resume including a list of similar projects performed and contact information for the similar project Owner(s).
 2. Resumes of bidder's proposed project manager and job superintendent.
- B. The Bidder's failure to provide the required project information may result in a determination of the Bidder being declared non-responsible by the Port.

- C. The Bidder shall submit this completed, **SIGNED** Responsibility Detail Form electronically (PDF), with all requested backup documentation, via email to the Contact(s) noted on the Low Responsive Bidder Selection Notification.

PROJECT: _____

PROJECT NO. _____

CONTRACT NO. _____

Responsibility Certification Form

The Low responsive Bidder shall complete the Responsibility Detail Form, attach all documentation and submit to the Port within 24 hours following receipt of the Low, Responsive Bidder Selection Notification. All forms shall be submitted electronically (PDF) via email to the contact(s) listed on the Selection Notice. Note, the same project may be used to demonstrate experience across multiple categories if applicable.

By completing and signing this Responsibility Detail Form, the Bidder certifies (or declares) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct, and the backup documentation, and any additional information requested by the Port is true and complete. The Bidder's failure to disclose the required information or the submittal of false or misleading information may result in the rejection of the Bidder's bid, revocation of award or contract termination.

The information provided herein is true and complete.

Signature of Authorized Representative

Date

Print Name and Title

THIS AGREEMENT is made and entered into by and between the PORT OF TACOMA, a State of Washington municipal corporation, hereinafter designated as the "Port," and:

The "Contractor":	<hr/> <hr/> <hr/> <hr/>	(Legal Name) (Address) (Address 2) (Phone No.)
The "Project" is:	<u>Maintenance Mezzanine and Shed Heating</u> <u>101140.01/ 070735</u> <u>902 Port of Tacoma Rd</u> <u>Tacoma, WA 98421</u>	(Title) (Project/ Contract No.) (Project Address) (Project Address 2)
The "Engineer" is:	<u>Jane Vandenberg, PE</u> <u>Director of Engineering</u> <u>ivandenberg@portoftacoma.com</u> <u>(253) 592-6777</u>	(Engineer) (Title) (Email) (Phone No.)
The "Contractor's Representative" is:	<hr/> <hr/> <hr/> <hr/>	(Representative) Title (Email) (Phone No.)

BACKGROUND AND REPRESENTATIONS:

The Port has caused Drawings, Specifications, and other Contract Documents to be prepared for the performance of Work on the Project.

The Port publicly solicited bids on the Contract Documents. The Contractor submitted a bid to the Port on the _____ day of _____, 20____ to perform the Work.

The Contractor represents that it has the personnel, experience, qualifications, capabilities, and means to accomplish the Work in strict accordance with the Contract Documents, within the Contract Time and for the Contract Price, and that it and its Subcontractors satisfy the responsibility criteria set forth in the Contract Documents, including any supplemental responsibility criteria.

The Contractor further represents that it has carefully examined and is fully familiar with all provisions of the Contract Documents, including any Addenda, that it has fully satisfied itself as to the nature, location, difficulty, character, quality, and quantity of the Work required by the Contract Documents and the conditions and other matters that may be encountered at or near the Project site(s), or that may affect performance of the Work or the cost or difficulty thereof including all applicable safety and site responsibilities, and that it understands and can satisfy all scheduling and coordination requirements and interim milestones.

AGREEMENT:

The Port and the Contractor agree as follows:

1.0 CONTRACTOR TO FULLY PERFORM THE WORK

The Contractor shall fully execute and complete the entire Work described in the Contract Documents, except to the extent specifically indicated in the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special or other Conditions included in the project manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

2.0 DATE OF COMMENCEMENT

The date of commencement of the Work, which is the date from which the Contract Time is measured, shall be fixed as the date this agreement is executed.

3.0 CONTRACT TIME AND LIQUIDATED DAMAGES

The Contractor shall achieve all interim milestones as set forth in the Contract Documents and Substantial Completion of the entire Work not later than **132** calendar days from contract execution, subject to adjustments of this Contract Time as provided in the Contract Documents. The Contractor shall achieve Final Completion of the Work within **30** calendar days of the date on which Substantial Completion is achieved.

Provisions for liquidated damages as a reasonable estimate of future loss, as of the date of this Agreement, are included in the Contract Documents. The parties agree that the stated liquidated damages are not penalties individually or cumulatively.

The liquidated damages for failure to achieve Substantial Completion by the prescribed date shall be **\$320** per calendar day. After the prescribed Final Completion date, the liquidated damages for failure to achieve Final Completion shall be **\$320** per calendar day.

Liquidated damages assessed by the Port will be deducted from monies due to the Contractor, or from monies that will become due to the Contractor. The liquidated damages, as specified and calculated herein, shall be levied for each and every calendar day that Substantial Completion and/or Final Completion of the work is delayed beyond the prescribed completion dates, or the completion dates modified by the Port for extensions of the contract time.

4.0 CONTRACT PRICE

In accordance with the Contractor's bid dated _____, the Port shall pay the Contractor in current funds for the Contractor's performance of the Contract the Contract Price of _____ Dollars (\$_____), subject to additions and deductions as provided in the Contract Documents. State and local sales tax is not included in the Contract Price but will be due and paid by the Port with each progress payment.

5.0 ALTERNATES

The Contract Price is based upon the following Alternates, if any, which are described in the Contract Documents and are hereby accepted by the Port:

_____.

6.0 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in the Contract Documents.

5.0 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in the Contract Documents.

This Agreement is entered into as of the day and year first written above:

CONTRACTOR

PORT OF TACOMA

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Executi
on
Date: _____

END OF SECTION

PERFORMANCE BOND # _____

CONTRACTOR (NAME AND ADDRESS)

SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)

OWNER (NAME AND ADDRESS)

AGENT OR BROKER (FOR INFORMATION ONLY)

PORT OF TACOMA

P.O. BOX 1837

TACOMA, WA 98401-1837

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, in the amount of _____ Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for _____ a copy of which Contract is by reference made a part hereof (the term "Contract" as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, all alterations, additions thereto, deletions therefrom and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed and issued pursuant to the provisions of Chapter 39.08 Revised Code of Washington.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

FURTHER:

- A. Surety hereby waives notice of any alterations, change orders, modifications or extensions of time made by the Port.
- B. Surety recognizes that the Contract includes provisions for additions, deletions and modifications to the work or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety's obligation hereunder.
- C. Whenever Contractor has been declared by the Port to be in default, and the Port has given Surety notice of the Port's determination of such default, Surety shall promptly (in no event more than fifteen (15) days following receipt of such notice) advise the Port of its intended action to:
 1. Remedy the default within fifteen (15) days following its advice to the Port as set forth above, or

2. Assume within fifteen (15) days, following its advice to the Port as set forth above, completion of the Contract in accordance with the Contract Documents and become entitled to payment of the balance of the Contract Sum, or
 3. Pay the Port upon completion of the Contract, in cash, the cost of completion together with all other reasonable costs and expenses incurred by the Port as a result of the Contractor's default, including but not limited to, those reasonable costs and expenses incurred by the Port in its efforts to mitigate its losses, which may include but are not limited to, attorney's fees and efforts to complete the Work prior to the Surety exercising the options available to it as set forth herein.
- D. If the Port shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment, shall pay all costs and attorney's fees incurred by the Port in enforcement of its rights hereunder. Venue for any action arising out of or in connection with this bond shall be in Pierce County, Washington.
- E. No right or action shall accrue on this bond to or for the use of any person or corporation other than the Port of Tacoma.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of A- FSC of (6) or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY

Signature

Printed Name and Title

CONTRACTOR

Signature

Printed Name and Title

Power of Attorney attached.

END OF SECTION

LABOR AND MATERIAL PAYMENT BOND # _____

CONTRACTOR (NAME AND ADDRESS)

SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)

OWNER (NAME AND ADDRESS)

PORT OF TACOMA

P.O. BOX 1837

TACOMA, WA 98401-1837

AGENT OR BROKER (FOR INFORMATION ONLY)

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, and all others entitled to recovery hereunder, in the amount of _____ Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors and assigns, jointly and severally firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for _____ a copy of which Contract is by reference made a part hereof (the term "Contract" as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, alterations, additions thereto, deletions therefrom and any other documents or provisions incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed pursuant to the provisions of Chapter 39.08 Revised Code of Washington.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly make payment to all claimants, as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and shall indemnify and save the Port harmless from all cost and damage by reason of Contractor's default, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject to the following conditions:

- A. The Surety hereby waives notice of any alterations, change orders, modifications or extensions of time made by the Port.
- B. Surety recognizes that the Contract includes provisions for additions, deletions and modifications to the Work or Contract Time and the amounts payable to the Contractor. Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety's obligation hereunder.

- C. Surety hereby agrees that every person protected under the provisions of RCW 39.08.010 who has not been paid as provided under the Contract and pursuant to RCW 39.08.010, less any amounts withheld pursuant to statute, and less retainage withheld pursuant to RCW 60.28, after the expiration of a period of thirty (30) days after the date on which the completion of the Contract in accordance with RCW 39.08, may sue on this bond, prosecute the suit to final judgment as may be due claimant, and have execution thereon including recovery of reasonable costs and attorney's fees as provided by RCW 39.08. The Port shall not be liable for the payment of any costs or expenses of any such suit.
- D. No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the Port, and where required, the Contractor, in accordance with RCW 39.08.030.
- E. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.
- F. If any Claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the Port as a result of such suit. Venue for any action arising out of or in connection with this bond shall be in Pierce County, Washington.

Signed and Sealed this _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of A- FSC of (6) or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY

CONTRACTOR

Signature

Signature

Printed Name and Title

Printed Name and Title

Power of Attorney attached.

END OF SECTION

Bond No. _____

Project Title: _____

Project No.: _____

Contract No. _____

KNOW ALL MEN BY THESE PRESENTS: That we _____,
a corporation existing under and by virtue of the laws of the State of Washington and authorized to do
business in the State of Washington, as Principal, and
_____, a corporation organized and existing under the
laws of the State of _____ and authorized to transact the business of
surety in the State of Washington, as Surety, are jointly and severally held and bound unto the PORT OF
TACOMA, hereinafter called Port, as Obligee, and are similarly held and bound unto the beneficiaries of
the trust fund created by RCW 60.28 as their heirs, executors, administrators, successors and assigns in
the penal sum of _____
(_____) plus 5% of any increases in the contract amount that have occurred or may occur,
due to change orders, increases in the quantities or the addition of any new item of work.

WHEREAS, on the _____ day of _____, the said Principal herein executed Contract No.
_____ with the Port for _____
_____.

WHEREAS, said contract and RCW 60.28 require the Port to withhold from the Principal the sum of 5%
from monies earned by the Principal on estimates during the progress of the work, hereinafter referred to
as earned retained funds.

WHEREAS, the Principal has requested that the Port accept a bond in lieu of earned retained funds as
allowed under Chapter 60.28 RCW.

NOW THEREFORE, this obligation is such that the Surety, its successors, and assigns are held and
bound unto the Port and unto all beneficiaries of the trust fund created by RCW 60.28.011(1) in the
aforesaid sum. This bond, including any proceeds therefrom, is subject to all claims and liens and in the
same manner and priority as set forth for retained percentages in Chapter 60.28 RCW. The condition of
this obligation is also that if the Principal shall satisfy all payment obligations to persons who may lawfully
claim under the trust fund created pursuant to Chapter 60.28 RCW, to the Port, and indemnify and hold
the Port harmless from any and all loss, costs, and damages that the Port may sustain by release of said
retainage to Principal, then this obligation shall be null and void, provided the Surety is notified by the
Port that the requirements of RCW 60.28.021 have been satisfied and the obligation is duly released by
the Port.

IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable under this obligation as Principal. The Surety will not be discharged or released from liability for any act, omission or defenses of any kind or nature that would not also discharge the Principal.

IT IS HEREBY FURTHER DECLARED AND AGREED that this obligation shall be binding upon and inure to the benefit of the Principal, the Surety, the Port, the beneficiaries of the trust fund created by Chapter 60.28 Revised Code of Washington (RCW) and their respective heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, said Principal and said Surety have caused these presents to be duly signed and sealed this _____ day of _____, 201__.

By: _____
Principal

Address: _____

City/ST/Zip: _____

Phone: _____

Surety Name _____

By: _____
Attorney-In-Fact

Address: _____

City/ST/Zip: _____

Phone: _____

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of A- FSC of (6) or higher, and be authorized to transact business in the State of Washington.

To:	Bank Name, Address, Phone	Escrow Account No:	
		Contract No:	Port fills in
		Project No:	Port fills in
Agency:	Port of Tacoma PO Box 1837 Tacoma, WA 98401-1837	Project Title:	Port fills in

The Undersigned _____, (Contractor Name and Address) hereinafter referred to as the Contractor, has directed the Port of Tacoma, hereinafter referred to as the Port, to deliver to _____ (Name of Bank), hereinafter referred to as "You", its checks for retainage under the Contract which shall be payable to You and the Contractor jointly, and which shall be held and disposed of by You in accordance with the following instructions and upon the terms and conditions hereinafter set forth.

ESCROW INSTRUCTIONS:

1. Checks made payable to You and the Contractor jointly upon delivery to You shall be endorsed by the Contractor and by You and then forwarded for collection by You. The moneys will then be used by You to purchase, as directed by the Contractor, bonds or other securities (hereinafter collectively referred to as "Securities") chosen by the Contractor and approved by the Port. Attached is a list of Securities approved by the Port. Other Securities, except stocks, may be selected by the Contractor, subject to express prior written approval of the Port, in its sole and absolute discretion. The purchase of Securities shall be in a form which shall allow You alone to reconvert such Securities into money if You are required to do so by the Port as provided in Paragraph 4 of this Escrow Agreement.
2. When and as interest on the Securities held by You pursuant to this Agreement accrues and is paid, You shall collect such interest and forward it to the Contractor at its address designated in the first paragraph unless otherwise directed by the Contractor.
3. You are not authorized to deliver to the Contractor all or any part of the checks or moneys received by You or the Securities held by You pursuant to this Agreement (or moneys derived from the sale of such Securities, or the negotiation of the Port's checks) except in accordance with written instructions from the Port's Sr. Contract Administrator. Compliance with such instructions shall relieve You of any further liability related thereto. The estimated final completion date on the Contract underlying this Agreement is _____.
4. In the event the Port orders You to do so in writing, You shall, within ten (10) days of receipt of such order, reconvert into money some or all of the Securities held by You pursuant to this Agreement, as required to satisfy the Port's order, and return such money, together with any other moneys held by You hereunder and required to satisfy the Port's order, to the Port. Consent of Contractor shall not be required for payment to the Port hereunder, and objection or other communication from Contractor shall not prevent, delay, or otherwise affect payment to the Port forthwith in accordance with the Port's order and this Agreement.
5. The Contractor agrees to pay You as compensation for Your services hereunder as follows: Payment of all fees shall be the sole responsibility of the Contractor and shall not be deducted from any checks, moneys, Securities, or other property placed with You or held by you pursuant to this Agreement until and unless the Port directs the release thereof to the Contractor, whereupon You shall be granted a first lien upon such property released and shall be entitled to reimburse Yourself from such property for the entire amount of Your fees as provided for hereinabove. In the event that You

are made a party to any litigation with respect to the checks, moneys, Securities, or other property held by You hereunder, or in the event that the conditions of this escrow are not promptly fulfilled or that You are required to render any service not provided for in these instructions, or that there is any assignment of the interests of this escrow or any modification hereof, You shall be entitled to reasonable compensation for such extraordinary services from the Contractor and reimbursement from the Contractor for all costs and expenses, including reasonable attorney fees occasioned by such default, delay, controversy or litigation.

6. This Agreement shall not be binding until executed by Contractor and Port, and accepted by You.
7. This instrument contains the entire agreement between You, the Contractor, and the Port with respect to this escrow. There are no terms, obligations, covenants, or conditions regarding this escrow other than those contained herein, and You are not a party to nor bound by any instrument or agreement regarding this escrow other than this Agreement. You shall not be required to take notice of any default or any other matter under the Contract nor be bound by nor required to give notice or demand under the Contract, nor required to take any action whatsoever except as herein expressly provided. You shall not be liable for any loss or damage not caused by Your own negligence or wilful misconduct.
8. The foregoing provisions shall be binding upon the assigns, successors, personal representatives and heirs of the parties hereto.
9. The Contractor's Federal Income Tax Identification number is _____.

The undersigned have read and hereby approve the instructions as given above governing the administration of this escrow and do hereby execute this Agreement this ____ day of _____, 20__.

Contractor:

Port of Tacoma

Signature

Signature

Name/Title

Name/ Port Treasurer or Deputy Treasurer

Date

Date

The above escrow instructions received and accepted this ____ day of _____, 20__.

Bank: By _____ Name: _____
(Signature of Authorized Bank Officer) Title: _____

SECURITIES AUTHORIZED BY THE PORT:

1. FDIC insured time deposits and time deposits in commercial banks authorized by the Washington State Public Deposit Protection Commission.
2. Savings account deposits in commercial banks authorized by the Washington State Public Deposit Protection Commission.
3. Bills, certificates, notes or bonds of the United States;
4. Other obligations of the United States or its agencies; and
5. Obligation of any corporation wholly-owned by the government of the United States;

INSTRUCTIONS FOR RETAINAGE ESCROW AGREEMENTS:

Whenever possible, use the Port of Tacoma (Port) approved Escrow Agreement. The Port, at its discretion, may or may not accept an agreement form from another source.

Please return all three (3) originals of the Agreement, with completed contractor and bank information and signatures, and the escrow account number. The Port will review and sign the Agreement and distribute copies. One (1) original will go directly to the Bank, one (1) original will be returned to the Contractor.

Fill in the following on the Escrow Agreement:

- 1) Page 1 – Escrow Account Number
- 2) Page 1 – Name, address, and phone number of the Bank
- 3) Page 2 – Signature, typed/printed name, date, and the title of the Contractor Signatory.
- 4) Page 2 – Signature, typed/printed name, date, and the title of the Authorized Bank Officer signatory.

Do not fill in the date in the paragraph directly following paragraph 9. The Port will fill in this date once the document has been fully executed by the Port.

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS
SECTION 00 63 25 – SUBSTITUTION REQUEST FORM DURING CONSTRUCTION

Project Title _____

Project No. _____

Submitted By: _____

Contract No. _____

Contractor: _____

Date: _____

Specification Title: _____

Section No. _____

Description: _____

Paragraph: _____

Page No. _____

Proposed Substitution: _____

Trade Name: _____

Model No.: _____

Manufacturer: _____

Address: _____

Phone No.: _____

Installer: _____

Address: _____

Phone No.: _____

History:

☐ New product ☐ 1-4 years old ☐ 5-10 years old ☐ More than 10 years old ☐ Other _____

Differences between proposed substitution and specified product: _____

☐ Point-by-point comparative data attached - REQUIRED

Reason for not providing specified item: _____

Similar Installation:

Project: _____ A/E _____

Address: _____

Owner: _____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Savings to Port for accepting substitution: \$ _____

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ # of days.

Supporting Data Attached: _____

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS
SECTION 00 63 25 – SUBSTITUTION REQUEST FORM DURING CONSTRUCTION

☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other _____

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
 - Same warranty will be furnished for proposed substitution as for specified product.
 - Same maintenance service and source of replacement parts, as applicable, is available.
 - Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
 - Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
 - Proposed substitution does not affect dimensions and functional clearances.
 - Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
 - Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.
-

Submitted By: _____

Signed By: _____ Firm: _____

Address: _____

Telephone: _____ Email: _____

Attachments: _____

A/E's REVIEW AND RECOMMENDATION

- ☐ Approve Substitution
- ☐ Approve Substitution as noted
- ☐ Reject Substitution - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

ENGINEER'S REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures. Prepare Change Order.
- ☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures. Prepare Change Order.
- ☐ Substitution rejected - Use specified materials.

Signed by: _____ Date: _____

END OF SECTION

ARTICLE 1 - THE CONTRACT DOCUMENTS

1.01 GENERAL

- A. Contract Documents form the Contract. The Contract Documents are enumerated in the Agreement between the Port and Contractor ("Agreement"). Together, the Contract Documents form the Contract. The Contract represents the entire integrated agreement between the parties and supersedes all prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only in writing and only as set forth in the Contract Documents.
- B. Headings only for convenience. The titles or headings of the sections, divisions, parts, articles, paragraphs, and subparagraphs of the Contract Documents are intended only for convenience.

1.02 DEFINITIONS

- A. "Contractor" means the person or entity contracting to perform the Work under these Contract Documents. The term Contractor includes the Contractor's authorized representative for purposes of identifying obligations and responsibilities under the Contract Documents, including the ability to receive notice and direction from the Port.
- B. "Day" means a calendar day unless otherwise specifically designated.
- C. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, including plans, elevations, sections, details, and diagrams.
- D. "Engineer" is the Port employee generally tasked with administering the Project on the Port's behalf and the person with overall responsibility for managing, for the Port, the Project scope, budget, and schedule. To the extent empowered, the Engineer may delegate to others at the Port (such as a Project Manager or Inspector) the responsibility for performing delegated responsibilities of the Engineer's under this Contract.
- E. "Port" means the Port of Tacoma. The Port will designate in writing a representative (usually the Engineer) who shall have the authority to act on the Port's behalf related to the Project. The "Port" does not include staff, maintenance or safety workers, or other Port employees or consultants that may contact the Contractor or be present at the Project site.
- F. "Project" is identified in the Agreement and is the total construction to be performed by or through the Port, of which the Work performed under the Contract Documents may be only a part.
- G. "Specifications" are those portions of the Contract Documents that specify the written requirements for materials, equipment, systems, standards and workmanship for the Work and for the performance of related services.
- H. "Subcontractor" means a person or entity that contracts directly with the Contractor to perform any Work under the Contract Documents. "Subcontractor of any tier" includes Subcontractors as well as any other person or entity, including suppliers, that contracts with a Subcontractor or a lower-tier Subcontractor (also referred to as "Sub-subcontractors") to perform any of the Work.
- I. "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, tools, equipment, materials, services and incidentals necessary to complete all obligations under the Contract Documents. The Work may constitute only a part of the Project, and may interface and need to be coordinated with the work of others.

1.03 INTENT OF THE CONTRACT DOCUMENTS

- A. Intent of Contract Documents. The intent of the Contract Documents is to describe the complete Work and to include all items necessary for the proper execution and completion of the Work by the Contractor.
- B. Contract Documents are complementary. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor is required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.
- C. No third party contract rights. The Contract Documents shall not create a contractual relationship of any kind (1) between the Port and a Subcontractor of any tier (although the Port does not waive any third-party beneficiary rights it may otherwise have as to Subcontractors of any tier), (2) between the Contractor and the Engineer or other Port employees or consultants, or (3) between any persons or entities other than the Port and Contractor.

1.04 CORRELATION OF THE CONTRACT DOCUMENTS

- A. Precedence. In the event of a conflict or discrepancy between or among the Contract Documents, the conflict or discrepancy will be resolved by the following order of precedence: with an addendum or Change Order having precedence over an earlier document, and computed dimensions having precedence over scaled dimensions and large scale drawings take precedence over small scale drawings:
 - 1. The signed Agreement
 - a. Supplemental Conditions
 - b. General Conditions
 - c. Division 01 General Requirements of Specifications
 - d. All other Specifications, including all remaining divisions, material and system schedules and attachments, and Drawings
 - e. All other sections in Division 00 not specifically identified herein by Section.
- B. Inconsistency between or among Contract Documents. If there is any inconsistency between the Drawings, schedules, or Specifications, or any attachments, the Contractor will make an inquiry to the Engineer to determine how to proceed, and, unless otherwise directed, the Contractor will provide the better quality or greater quantity of any work or materials, as reasonably interpreted by the Port, at no change in the Contract Sum or Contract Time. Thus, if Work is shown on Drawings but not contained in Specifications or schedules, or contained in Specifications or schedules but not shown on the Drawings, the Work as shown or contained will be provided at no change in the Contract Sum or Contract Time, according to Specifications or Drawings to be issued by the Port.
- C. Inconsistency with law. In the event of a conflict between the Contract Documents and applicable laws, codes, ordinances, regulations or orders of governmental authorities having jurisdiction over the Work, or in the event of any conflict between such laws, the most stringent requirements govern.
- D. Organization of Contract Documents. The organization of the Specifications and Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of the Work to be performed. The Port assumes no responsibility for the division and proper coordination of Work between particular Subcontractors.

- E. Bid quantities are estimates only. Any "bid quantities" set forth in the Contract Documents are estimates only. The Port does not warrant that the actual amount of Work will correspond to any estimates. The basis of payment will be the actual quantities performed in accordance with the Contract Documents.

1.05 OWNERSHIP OF THE CONTRACT DOCUMENTS

- A. Port owns all Contract Documents. All Drawings, Specifications, and other Contract Documents furnished to the Contractor are Port property, and the Port retains all intellectual property rights, including copyrights. The Contract Documents are to be used only with respect to the Project.

ARTICLE 2 - PORT OF TACOMA

2.01 AUTHORITY OF THE ENGINEER

- A. Engineer will be Port's representative. The Engineer or the Engineer's designee will be the Port's representative during the Project and will administer the Project on the Port's behalf.
- B. Engineer may enforce all obligations. The Engineer has the authority to enforce all requirements imposed on the Contractor by the Contract Documents.
- C. Only Engineer is agent of Port. Other than the Engineer, no other Port employee or consultant is an agent of the Port, and none are authorized to agree on behalf of the Port to changes in the Contract Sum or Contract Time, nor to waive provisions of the Contract Documents, nor to direct the Contractor to take actions that change the Contract Sum or Contract Time, nor to accept notice of protests or claims on behalf of the Port.

2.02 ADMINISTRATION OF THE CONTRACT

- A. Port will administer Contract. The Port will provide administration of the Contract through the Engineer or the Engineer's designee. All communications with the Port or its consultants related to the Contract will be through the designated representative.
- B. Port not responsible for means and methods. The Port is not responsible for, and will have no control or charge of, the means, methods, techniques, sequences, or procedures of construction, or for safety precautions or programs incidental thereto, because these are the sole responsibility of the Contractor. If the Port makes any suggestion of means, methods, techniques, sequences or procedures, the Contractor will exercise its independent judgment in deciding whether to adopt the suggestion, except as otherwise provided in the Contract Documents.
- C. Port not responsible for acts or omissions of Contractor or Subcontractors. The Port is not responsible for, and will have no control or charge of, the acts or omissions of the Contractor, Subcontractors of any tier, suppliers, or any of their agents or employees, or any other persons performing a portion of the Work.
- D. Port not responsible for the Work. The Port is not responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The presence of the Engineer or others at the Project site at any time does not relieve the Contractor from its responsibility for non-conforming Work.
- E. Port will have access to the Work. The Port and its representatives will at all times have access to the Work in progress, and the Contractor will provide proper facilities for such access and for inspection.

2.03 INFORMATION PROVIDED BY THE PORT

- A. Port to furnish information with reasonable promptness. The Port shall furnish information and services required of the Port by the Contract Documents with reasonable promptness.

- B. Subsurface investigation. The Port may have undertaken a limited investigation of the soil and other subsurface conditions at the Project site for design purposes only. The results of these investigations will be available for the convenience of the Contractor, but they are not Contract Documents. There is no warranty or guarantee, express or implied, that the conditions indicated are representative of those existing at the site or that unforeseen developments may not occur. The Contractor is solely responsible for interpreting the information.

2.04 CONTRACTOR REVIEW OF PROJECT INFORMATION

- A. Contractor to familiarize itself with site and conditions of Work. Prior to executing the Contract, the Contractor shall visit the site, become generally familiar with local conditions under which the Work is to be performed, and correlate personal observations with the requirements of the Contract Documents. By signing the Contract, the Contractor confirms that the Contract Sum is reasonable compensation for the Work; that the Contract Time is adequate; that it has carefully examined the Contract Documents and the Project site; and that it has satisfied itself as to the nature, location, and character of the Work, the labor, materials, equipment, and other items required and all other requirements of the Contract Documents. The Contractor's failure fully to acquaint itself with any such condition does not relieve the Contractor from the responsibility for performing the Work in accordance with the Contract Documents, within the Contract Time, and for the Contract Sum.
- B. Contractor to review Contract Documents. Because the Contract Documents are complementary, the Contractor will, before starting each portion of the Work, carefully study and compare the various Drawings, Specifications, and other Contract Documents, as well as all information furnished by the Port.
- C. Contractor to confirm field conditions. Before starting each portion of the Work the Contractor shall take field measurements of and verify any existing conditions, including all Work in place, and all general reference points; shall observe any conditions at the site affecting the Contractor; and shall carefully compare field measurements, conditions and other information known to the Contractor with the Contract Documents.

2.05 PORT'S RIGHT TO REJECT, STOP AND/OR CARRY-OUT THE WORK

- A. Port may reject Work. The Port has the authority but not the obligation to reject work, materials and equipment that is defective or that otherwise does not conform to the Contract Documents, and to decide questions concerning the Contract Documents. However, the failure to so reject or the presence of the Port at the site shall not be construed as assurance that the Work is acceptable or being completed in compliance with the Contract Documents.
- B. Port may stop Work. If the Contractor fails to correct Work that does not comply with the requirements of the Contract Documents, or repeatedly or materially fails to properly carry out the Work, the Port may issue an order to stop all or a portion of the Work until the cause for the order has been eliminated. The Port's right to stop the Work shall not impose a duty on the Port to exercise this right for the benefit of the Contractor or any third party.
- C. Port may carry-out Work. If the Contractor fails to perform the Work properly, fails to perform any provision of this Contract, or fails to maintain the Progress Schedule, or if the Port reasonably concludes that the Work will not be completed in the specified manner or within the Contract Time, then the Port may, after three (3) days' written notice to the Contractor and without prejudice to any other remedy the Port may have, perform itself or have performed any or all of the Work and may deduct the cost thereof from any payment then or later due the Contractor.

2.06 SEPARATE CONTRACTORS

- A. Port may engage separate contractors or perform work with its own forces. The Port may contract with other contractors ("Separate Contractor") in connection with the Project or perform work with its own forces. The Contractor shall coordinate and cooperate with any Port forces or Separate Contractors, as applicable. The Contractor shall provide reasonable opportunity for the introduction and storage of materials and the execution of work by others.
- B. Contractor to inspect work of others. If any part of the Contractor's Work depends on the work of the Port or any Separate Contractor, the Contractor shall inspect and promptly report to the Port, in writing, any defects that impact the Contractor. Failure of the Contractor to so inspect and report defects in writing shall constitute an acceptance by Contractor of the work of the Port or Separate Contractor.
- C. Contractor to resolve claims of others. Should the Contractor or any of its Subcontractors of any tier cause damage of any kind, including but not limited to delay, to any Separate Contractor, the Contractor shall promptly and using its best efforts settle or otherwise resolve the dispute with the Separate Contractor. The Contractor shall also promptly remedy damage caused to completed or partially completed construction.

2.07 OFFICERS AND EMPLOYEES OF THE PORT

- A. No personal liability. Officers, employees, and representatives of the Port, including the Commissioners, acting within the scope of their employment, shall not be personally liable to Contractor for any acts or omissions arising out of the Project.

ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES

3.01 DUTY TO PERFORM THE ENTIRE WORK

- A. Contractor must perform entire Work in accordance with Contract Documents. The Contractor shall perform the entire Work required by the Contract in accordance with the Contract Documents. Unless otherwise specifically provided, the Contractor shall provide and pay for all labor, tools, equipment, materials, electricity, power, water, other utilities, transportation and other facilities necessary for the execution and completion of the Work.
- B. Contractor shall be independent contractor. The Contractor shall be and operate as an independent contractor in the performance of the Work. The Contractor is not authorized to enter into any agreements or undertakings for or on behalf of the Port and is not an agent or employee of the Port.

3.02 OBSERVED ERRORS, INCONSISTENCIES, OMISSIONS OR VARIANCES IN THE CONTRACT DOCUMENTS

- A. Contractor to notify Port of any discrepancy. The Contractor's obligations to review and carefully study the Contract Documents and field conditions are for the purpose of facilitating coordination and construction. If the Contractor at any time observes that the Contract Documents, including Drawings and Specifications, vary from the conditions of the Project site, are in error, or omit any necessary detail, the Contractor shall promptly notify the Engineer in writing through a Request for Information. Any Work done after such observation, until authorized by the Engineer, shall be at Contractor's risk. The Contractor shall also promptly report to the Engineer any observed error, inconsistency, omission, or variance with applicable laws through a Request for Information. If the Contractor fails either to carefully study and compare the Contract Documents, or to promptly report any observed error, inconsistency, omission, or variance, the Contractor shall assume full responsibility and shall bear all costs, liabilities and damages attributable to the error, inconsistency, omission, or variance.

- B. Requests for Information. The Contractor shall submit Requests for Information concerning the Contract Documents by following the procedure and using such form as the Port may require. The Contractor shall minimize Requests for Information by thoroughly studying the Contract Documents and reviewing all Subcontractor requests. The Contractor shall allow adequate time in its planning and scheduling for a response from the Port to a Request for Information.
- C. Port may provide information to supplement Drawings and Specifications. Minor items of work or detail that are omitted from the Drawings and Specifications but inferable from the information presented and normally provided by accepted good practice shall be provided and/or performed by the Contractor as part of the Contract Sum and within the Contract Time. Similarly, the Engineer may furnish to the Contractor additional Drawings and clarifications, consistent with the Contract Documents, as necessary to detail and illustrate the Work. The Contractor shall conform its Work to such additional Drawings and clarifications at no increase in the Contract Sum or Contract Time.

3.03 SUPERVISION AND RESPONSIBILITY FOR SUBCONTRACTORS

- A. Contractor responsible for Work and workers. The Contractor shall have complete control of the means, methods, techniques, sequences or procedures related to the Work, and for all safety precautions or programs. The Contractor shall have complete control over and responsibility for all personnel performing the Work. The Contractor is also responsible for the acts and omissions of the Contractor's principals, employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors of any tier.
- B. Contractor to supervise the Work. The Contractor shall continuously supervise and direct the Work using competent and skilled personnel and the Contractor's best skill and attention.
- C. Contractor to enforce discipline and good order. The Contractor shall enforce strict discipline and good order among all workers on the Project, and shall not employ any unfit person or anyone not skilled in the work to which they are assigned. Incompetent, careless, or negligent workers shall immediately be removed from the Work. The Port may, but is not obligated to, require the Contractor to remove from the Work, at no change in the Contract Sum or Contract Time, anyone whom the Port considers objectionable.

3.04 MATERIALS AND EQUIPMENT

- A. Material and equipment to be new. All materials and equipment to be incorporated into the Work shall be new unless specifically provided otherwise in the Contract Documents. The Contractor shall, if required in writing by the Port, furnish satisfactory evidence regarding the kind and quality of any materials, identify the source, and warrant compliance with the Contract Documents. The Contractor shall ensure that all materials and equipment are protected, kept dry and stored under cover in a manner to protect such materials and equipment.
- B. Material and equipment shall conform to manufacturer instructions. All materials and equipment shall conform, and shall be applied, installed, used, maintained and conditioned in accordance with, the instructions of the applicable manufacturer, fabricator or processor, unless otherwise specifically provided by the Engineer.

3.05 CONTRACTOR WARRANTIES

- A. Work will be of good quality and performed in workmanlike manner. In addition to any specific warranties set forth in the Contract Documents, the Contractor warrants that the Work, including all materials and equipment furnished under the Contract, will be of good quality and new, will be performed in a skillful and workmanlike manner and will conform to the requirements of the

Contract Documents. Any Work not conforming to this warranty, including unapproved or unauthorized substitutions, shall be considered defective.

- B. Work will be free from defects. The Contractor warrants that the Work will be free from defects for a period of one (1) year from the date of Substantial Completion of the Project.
- C. Contractor to collect and deliver warranties to Port. The Contractor shall collect and deliver to the Port any written warranties required by the Contract Documents. These warranties shall be obtained and enforced by the Contractor for the benefit of the Port without the necessity of separate assignment. These warranties shall extend to the Port all rights, claims, benefits and interests that the Contractor may have under express or implied warranties or guarantees against a Subcontractor of any tier, supplier or manufacturer for defective or non-conforming Work. Warranty provisions that purport to limit or alter the Port's rights under the Contract Documents or the laws of the State of Washington are null and void.
- D. General requirements. The Contractor is not relieved of its general warranty obligations by the specification of a particular product or procedure in the Contract Documents. Warranties in the Contract Documents shall survive completion, acceptance and final payment.

3.06 REQUIRED WAGES

- A. Contractor will pay required wages. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project. See Specification Section 00 73 46.
- B. The Contractor shall defend (at Contractor's sole cost, with legal counsel approved by Port), indemnify and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs and expenses, whether direct or indirect, and including but not limited to attorneys' fees and consultants' fees and other costs and expenses of litigation, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or Chapter 51 RCW ("Industrial Insurance").

3.07 STATE AND LOCAL TAXES

- A. Contractor will pay taxes on consumables. The Contractor will pay the retail sales tax on all consumables used during performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Contract Sum.
- B. Port will pay taxes on the Contract Sum. The Port will pay state and local retail sales tax on the Contract Sum with each progress payment and on final payment for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local taxing authority. Rule 170: WAC 458-20-170.
- C. Direct all tax questions to the Department of Revenue. The Contractor should direct all questions concerning taxes on any portion of the Work to the State of Washington Department of Revenue or to the local taxing authority.
- D. State Sales Tax - Rule 171: WAC 458-20-171. For work performed related to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used, primarily, for foot or vehicular traffic, the Contractor shall include Washington State Retail Sales Taxes in the various schedule prices, or other contract amounts, including those that the Contractor pays on the purchase of materials, equipment, or supplies used or consumed in doing the Work.
 - 1. The bid form will indicate which bid items are subject to Rule 171. Any such identification by the Port is not binding upon the Department of Revenue.

3.08 PERMITS, LICENSES, FEES, AND ROYALTIES

- A. Contractor to provide and pay for permits unless otherwise specified. Unless otherwise specified, the Contractor shall procure and pay for all permits, licenses, and governmental inspection fees necessary or incidental to the performance of the Work. All costs related to these permits, licenses, and inspections shall be included in the Contract Sum. Any action taken by the Port to assist the Contractor in obtaining permits or licenses shall not relieve the Contractor of its sole responsibility to obtain and pay for permits, licenses, and inspections as part of the Contract Sum.
- B. Contractor's obligations when permit must be in Port's name. When applicable law or agency requires a permit to be issued to a public agency, the Port will support the Contractor's request for the permit and accept the permit in the Port's name, if:
 - 1. The Contractor takes all necessary steps required for the permit to be issued;
 - 2. The permit applies to Work performed in connection with the Project; and
 - 3. The Contractor agrees in writing to abide by all requirements of the permit and to defend and hold harmless the Port from any liability in connection with the permit.
- C. Contractor to pay royalties. The Contractor shall pay all royalties and license fees required for the Work unless otherwise specified in the Contract Documents.

3.09 SAFETY

- A. Contractor solely responsible for safety. The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work and the performance of the Contract.
- B. Port not responsible for safety. The Port may identify safety concerns to the Contractor. However, no action or inaction of the Port or any third party relating to safety will: (1) relieve the Contractor of its sole and complete responsibility for safety and sole liability for any consequences; (2) impose any obligation on the Port or a third party to inspect or review the Contractor's safety program or precautions; (3) impose any continuing obligation on the Port or a third party to ensure the Contractor performs the Work safely; or (4) affect the Contractor's responsibility for the protection of property, workers, and the general public.
- C. Contractor to maintain a safe Work site. The Project site may be occupied during performance of the Work. The safety of these site occupants is of paramount importance to the Port. The Contractor shall maintain the Work site and perform the Work in a safe manner and in accordance with the Washington Industrial Safety and Health Act (WISHA) and all other applicable safety laws, rules, and regulations. This requirement shall apply continuously and not be limited to working hours.
- D. Contractor to protect Work site and adjacent property until Final Completion. The Contractor shall continuously protect the Work and adjacent property from damage. At all times until Final Completion, the Contractor shall be responsible for and protect from damage, weather, deterioration, theft, and vandalism the Work and all materials, equipment, tools, and other items incorporated or to be incorporated in the Work, and shall repair any damage, injury or loss.

3.10 CORRECTION OF WORK

- A. Contractor to correct defective Work. The Contractor shall, at no cost to the Port, promptly correct Work that is defective or that otherwise fails to conform to the requirements of the Contract Documents. Such Work shall be corrected, whether before or after Substantial Completion, and even if it was previously inspected or observed by the Port.

- B. One-year correction period. The Contractor shall correct all defects in the Work appearing within one (1) year of Substantial Completion or within any longer period prescribed by law or by the Contract Documents. The Contractor shall initiate remedial action within fourteen (14) days of receipt of notice from the Port and shall complete remedial work within a reasonable time. Work corrected by the Contractor shall be subject to the provisions of this Section 3.10 for an additional one-year period following the Port's acceptance of the corrected Work.
- C. Contractor responsible for defects and failures to correct. The Contractor shall be responsible for any expenses incurred by the Port resulting from defects in the Work. If the Contractor refuses or neglects to correct the defects or does not timely accomplish corrections, the Port may correct the Work and charge the Contractor the cost of the corrections. If damage or loss of service may result from a delay in correction, the corrections may be made by the Port and reimbursed by the Contractor.
- D. Port may accept defective work. The Port may, at its sole option, elect to retain defective or nonconforming Work. In such a case, the Port shall reduce the Contract Sum by a reasonable amount to account for the defect or non-conformance.
- E. No period of limitation established. Nothing contained in this Section 3.10 establishes a period of limitation with respect to any obligations under the Contract Documents or law. The establishment of the one (1) year correction period relates only to the specific obligation of the Contractor to correct defective or non-conforming Work.

3.11 UNCOVERING OF WORK

- A. Contractor to uncover work covered prior to inspection. If any portion of the Work is covered prior to inspection and approval, the Contractor shall, at its expense, uncover or remove the Work for inspection by the Port or others, and replace the Work to the standard required by the Contract Documents.
- B. Contractor to uncover work at Port's request. After initial inspection and observation, the Port may order a reexamination of Work, and the Work must be uncovered by the Contractor. If the uncovered Work complies with the Contract Documents, the Port shall pay the cost of reexamination and replacement. If the Work is found not to comply with the Contract Documents, the Contractor shall pay the cost of replacement unless the Contractor demonstrates that it did not cause the defect in the Work.

3.12 RELOCATION OF UTILITIES

- A. Contractor should assume underground utilities are in approximate locations. The Contractor should assume that the locations of any underground or hidden utilities, underground tanks, and plumbing or electrical runs indicated in surveys or the Contract Documents are shown in approximate locations. The accuracy of this information is not guaranteed by the Port and shall be verified by the Contractor. The Contractor shall comply with RCW 19.122.030 and utilize a utility locator service to locate utilities on Port property. The Contractor shall bear the risk of loss if any of its Work directly or indirectly damages or interrupts any utility service or causes or contributes to damages of any nature.
- B. Utility relocation or removal. Where relocation or removal of utilities is necessary or required, it shall be performed at the Contractor's sole expense, unless the Contract Documents specify otherwise. If a utility owner is identified as being responsible for relocating or removing utilities, the work will be accomplished at the utility owner's convenience, either during or in advance of construction. Unless otherwise specified, it shall be the Contractor's sole responsibility to coordinate, schedule, and pay for work performed by a utility owner.

- C. Contractor to notify Port of unknown utilities. If the Contractor discovers the presence of any unknown utilities, it shall immediately notify the Engineer in writing.

3.13 LABOR

- A. Contractor responsible for labor peace. The Contractor is responsible for labor peace relating to the Work and shall cooperate in maintaining Project-wide labor harmony. The Contractor shall use its best efforts as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes or strikes.
- B. Contractor to minimize impact of labor disputes. The Contractor will take all necessary steps to prevent labor disputes from disrupting or otherwise interfering with access to Port property. If a labor dispute disrupts the progress of the Work or interferes with access, the Contractor shall promptly and expeditiously take all necessary action to eliminate or minimize the disruption or interference.

3.14 INDEMNIFICATION

- A. Duty to defend, indemnify, and hold harmless. To the fullest extent permitted by law and subject to this Section 3.14, the Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify and hold harmless the Port, including its Commission, officers, managers, employees (including the Engineer), any consultants, and the agents and employees, successors and assigns of any of them (the "Indemnified Parties") from and against claims, damages, lawsuits, losses (including loss of use), disbursements, liabilities, obligations, fines, penalties, costs and expenses, whether direct and indirect or consequential, including but not limited to consultants' fees, and attorneys' fees incurred on such claims and in proving the right to indemnification ("Claims"), arising out of or resulting from the acts or omissions of the Contractor, a Subcontractor of any tier, their agents and anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable (individually and collectively, the "Indemnitor").
- B. Duty to defend, indemnify, and hold harmless for sole negligence. The Contractor will fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence or willful misconduct of the Indemnitor.
- C. Duty to defend, indemnify, and hold harmless for concurrent negligence. Where Claims arise from the concurrent negligence of (1) the Port and (2) the Indemnitor, the Contractor's obligations to indemnify and defend the Indemnified Parties under this Section 3.14 shall be effective only to the extent of the Indemnitor's negligence.
- D. Duty to indemnify not limited by workers' compensation or similar employee benefit acts. In claims against any of the Indemnified Parties by an employee of the Contractor, a Subcontractor of any tier, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Section 3.14 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable under workers' compensation acts, disability benefit acts or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Indemnified Parties under Title 51 RCW, "Industrial Insurance."
- E. Intellectual property indemnification. The Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port) indemnify and hold the Indemnified Parties harmless for Claims for infringement by the Contractor of copyrights or patent rights arising out of or relating to the Project.
- F. Labor peace indemnification. If the Contractor fails to satisfy its labor peace obligations under the Contract, the Contractor will be liable for and shall defend (at the Contractor's sole cost, with

legal counsel approved by Port), indemnify and hold harmless the Indemnified Parties for Claims brought against the Port by third parties (including but not limited to lessees, tenants, contractors, customers, licensees and invitees of the Port) for injunctive relief or monetary loss.

- G. Joinder. The Contractor agrees to being added by the Port as a party to any arbitration or litigation with third parties in which the Port alleges indemnification or seeks contribution from the Indemnitor. The Contractor shall cause each of its Subcontractors of any tier to similarly stipulate in their subcontracts; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier.
- H. Other. To the extent that any portion of this Section 3.14 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect. The obligations of the Contractor under this Section 3.14 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity which would otherwise exist. To the extent the wording of this Section 3.14 would reduce or eliminate an available insurance coverage, it shall be considered modified to the extent necessary so that the insurance coverage is not affected. This Section 3.14 shall survive completion, acceptance, final payment and termination of the Contract.

3.15 WAIVER OF CONSEQUENTIAL DAMAGES

- A. Mutual waiver of consequential damages. The Contractor and Port waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes but is not limited to: (1) damages incurred by the Port for rental expenses, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and (2) damages incurred by the Contractor for principal and home office overhead and expenses including but not limited to the compensation of personnel stationed there, for losses of financing, business and reputation, for losses on other projects, for loss of profit, and for interest or financing costs. This mutual waiver includes but is not limited to all consequential damages due to either party's termination.
- B. Limitation. Nothing contained in this Section 3.15, however, shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents, to preclude damages specified in the Agreement or to affect the Contractor's obligation to indemnify the Port for direct, indirect or consequential damages alleged by a third party.

ARTICLE 4 - SUBCONTRACTORS AND SUPPLIERS

4.01 RESPONSIBILITY FOR ACTIONS OF SUBCONTRACTORS AND SUPPLIERS.

- A. Contractor responsible for Subcontractors. The Contractor is fully responsible to the Port for the acts and omissions of its Subcontractors of any tier and all persons either directly or indirectly employed by the Contractor or its Subcontractors.

4.02 AWARD OF CONTRACTS TO SUBCONTRACTORS AND SUPPLIERS

- A. Contractor to provide proposed Subcontractor information. The Contractor, within ten (10) days after the Port's notice of award of the Contract, shall provide to the Engineer with the names of the persons or entities proposed to perform each of the principal portions of the Work (i.e., either a Subcontractor listed in a bid or proposal or a Subcontractor performing Work valued at least ten percent (10%) of the Contract Sum) and the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work. No progress payment will become due until after this information has been furnished.
- B. Port to respond promptly with objections. The Port may respond promptly to the Contractor in writing stating (1) whether the Port has reasonable objection to any proposed person or entity or

(2) whether the Port requires additional time for review. If the Port makes a reasonable objection, the Contractor shall replace the Subcontractor with no increase to the Contract Sum or Contract Time. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work and compliance with all of the requirements of the Contract within the Contract Sum and Contract Time.

- C. Reasonable objection defined. "Reasonable objection" as used in this Section 4.02 includes but is not limited to: (1) a proposed Subcontractor of any tier different from the entity listed with the bid, (2) lack of "responsibility" of the proposed Subcontractor, as defined by Washington law and the Bidding Documents, or lack of qualification or responsibility of the proposed Subcontractor based on the Contract or Bidding Documents, or (3) failure of the Subcontractor to perform satisfactorily in the Port's opinion (such as causing a material delay or submitting a claim that the Port considers inappropriate) on one or more projects for the Port within five (5) years of the bid date.
- D. No substitution allowed without permission. The Contractor shall not substitute a Subcontractor, person, or organization without the Engineer's written consent.

4.03 SUBCONTRACTOR AND SUPPLIER RELATIONS

- A. Contractor to schedule, supervise, and coordinate Subcontractors. The Contractor shall schedule, supervise and coordinate the operations of all Subcontractors of any tier, including suppliers. The Contractor shall ensure that appropriate Subcontractors coordinate the Work of lower-tier Subcontractors.
- B. Subcontractors to be bound to Contract Documents. By appropriate agreement, the Contractor shall require each Subcontractor and supplier to be bound to the terms of the Contract Documents and to assume toward the Contractor, to the extent of their Work, all of the obligations that the Contractor assumes toward the Port under the Contract Documents. Each subcontract shall preserve and protect the rights of the Port and shall allow to the Subcontractor, unless specifically provided in the subcontract, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Port. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with lower-tier Subcontractors.
- C. Contractor to correct deficiencies in Subcontractor performance. When a portion of the Work subcontracted by the Contractor is not being prosecuted in accordance with the Contract Documents, or if such subcontracted Work is otherwise being performed in an unsatisfactory manner in the Port's opinion, the Contractor shall, on its own initiative or upon the written request of the Port, take immediate steps to correct the deficiency or remove the non-performing party from the Project. The Contractor shall replace inadequately performing Subcontractors upon request of the Port at no change in the Contract Sum or Contract Time.
- D. Contractor to provide subcontracts. Upon request, the Contractor will provide the Port copies of written agreements between the Contractor and any Subcontractor.

ARTICLE 5 - WORKFORCE AND NON-DISCRIMINATION REQUIREMENTS

5.01 COMPLIANCE WITH NON-DISCRIMINATION LAWS

- A. Contractor to comply with non-discrimination laws. The Contractor shall fully comply with all applicable laws, regulations, and ordinances pertaining to non-discrimination.

5.02 SMALL BUSINESS ENTERPRISE PARTICIPATION.

- A. Small business participation encouraged. The Port's policy is to encourage the Contractor to solicit and document participation, and to provide and promote the maximum lawful, practicable opportunity for increased participation, by small business enterprises.

ARTICLE 6 - CONTRACT TIME AND COMPLETION

6.01 CONTRACT TIME

- A. Contract Time is measured from Contract execution. Unless otherwise provided in the Agreement, the Contract Time is the period of time, including authorized adjustments, specified in the Contract Documents from the date the Contract is executed to the date Substantial Completion of the Work is achieved.
- B. Commencement of the Work. The Contractor shall begin Work in accordance with the notice of award and the notice to proceed and shall complete all Work within the Contract Time. When the Contractor's signed Agreement, required insurance certificate with endorsements, bonds and other submittals required by the notice of award have been accepted by the Port, the Port will execute the Contract and, following receipt of other required pre-work submittals, will issue a notice to proceed to allow the Contractor to mobilize and commence physical Work at the Project site, as further described in these contract documents. No Work at the Project site may commence until the Port issues a notice to proceed.
- C. Contractor shall achieve specified completion dates. The Contractor shall achieve Substantial Completion within the Contract Time and shall achieve Final Completion within the time period thereafter stated in the Contract Documents.
- D. Time is of the essence. Time limits stated in the Contract Documents, including any interim milestones, are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

6.02 PROGRESS AND COMPLETION

- A. Contractor to maintain schedule. The Contractor's sequence and method of operations, application of effort, and work force shall at all times be created and implemented to ensure the orderly, expeditious, and timely completion of the Work and performance of the Contract. The Contractor shall furnish sufficient forces and shall work such hours, including extra shifts, overtime operations and weekend and holiday work as may be necessary to ensure completion of the Work within the Contract Time and the approved Progress Schedule.
- B. Contractor to take necessary steps to meet schedule. If the Contractor fails substantially to perform in a timely manner in accordance with the Contract Documents and, through the fault of the Contractor or Subcontractor(s) of any tier, fails to meet the Progress Schedule, the Contractor shall take such steps as may be necessary to immediately improve its progress by increasing the number of workers, shifts, overtime operations or days of work, or by other means and methods, all without additional cost to the Port. If the Contractor believes that any action or inaction of the Port constitutes acceleration, the Contractor shall immediately notify the Port in writing and shall not accelerate the Work until the Port either directs the acceleration in writing or denies the constructive acceleration.
- C. Liquidated damages not exclusive. Any provisions in the Contract Documents for liquidated damages shall not preclude other damages due to breaches of Contract of the Contractor.

6.03 SUBSTANTIAL COMPLETION

- A. Substantial Completion defined. Substantial Completion is the stage in the progress of the Work, or portion or phase thereof, when the Work or designated portion is sufficiently complete

in accordance with the Contract Documents so that the Port can fully occupy or utilize the Work, or the designated portion thereof, for its intended use, all requirements in the Contract Documents for Substantial Completion have been achieved, and all required documentation has been properly submitted to the Port in accordance with the Contract Documents. All Work other than incidental corrective or punch list Work and final cleaning must be completed. The fact that the Port may occupy the Work or a designated portion thereof does not indicate that Substantial Completion has occurred or that the Work is acceptable in whole or in part.

- B. Work not Substantially Complete unless Final Completion attainable. The Work is not Substantially Complete unless the Port reasonably judges that the Work can achieve Final Completion within the period of time specified in the Contract Documents.
- C. Notice of Substantial Completion. When the Work or designated portion has achieved Substantial Completion, the Port will provide a notice to establish the date of Substantial Completion. The notice shall establish responsibilities of the Port and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all remaining Work. If the notice of Substantial Completion does not so state, all responsibility for the foregoing items shall remain with the Contractor until Final Completion.

6.04 COMPLETION OF PUNCH LIST

- A. Contractor shall complete punch list items prior to Final Completion. The Contractor shall cause punch list items to be completed prior to Final Completion. If, after Substantial Completion, the Contractor does not expeditiously proceed to correct punch list items or if the Port considers that the punch list items are unlikely to be completed prior to the date established for Final Completion (or such other period of time as is specified in the Contract Documents), the Port may, upon seven (7) days' written notice to the Contractor, take over and perform some or all of the punch list items. The Port may also take over and complete any portion of the Work at any time following Substantial Completion and deduct the actual cost of performing the Work (including direct and indirect costs) from the Contract Sum. The Port's rights under this Section 6.04 are not obligations and shall not relieve the Contractor of its responsibilities under any other provisions of the Contract Documents.

6.05 FINAL COMPLETION

- A. Final Completion. Upon receipt of written notice from the Contractor that all punch list items and other Contract requirements are completed, the Contractor will notify the Port, and the Port will perform a final inspection. If the Port determines that some or all of the punch list items have not been addressed, the Contractor shall be responsible to the Port for all costs, including re-inspection fees, for any subsequent reviews to determine completion of the punch list. When the Port determines that all punch list items have been satisfactorily addressed, that the Work is acceptable under the Contract Documents and that the Work has fully been performed, the Port will promptly notify the Contractor of Final Completion.
- B. Contractor responsible for costs if Final Completion is not timely achieved. In addition to any liquidated damages, the Contractor is liable for, and the Port may deduct from any amounts due the Contractor, all costs incurred by the Port for services performed after the contractual date of Final Completion, whether or not those services would have been performed prior to that date had Final Completion been timely achieved.
- C. Final Completion submittals. The Port is not obligated to accept the Project as complete until the Contractor has submitted all required submittals to the Port.
- D. Contractor responsible for the Work until Final Completion. The Contractor shall assume the sole risk of loss and responsibility for all Work under the Contract, and all materials to be

incorporated in the Work, whether in storage or at the Project site, until Final Completion. Damage from any cause to either permanent or temporary Work, utilities, materials, equipment, existing structures, the site, or other property owned by the Port or others, shall be repaired by the Contractor to the reasonable satisfaction of the Port at no change in the Contract Sum.

6.06 FINAL ACCEPTANCE

- A. Final Acceptance. Final Acceptance is the formal action of the Port accepting the Project as complete. Public notification of Final Acceptance will be posted on the Port's external website (<<http://www.portoftacoma.com/final-acceptance>>).
- B. Final Acceptance not an acceptance of defective Work. Final Acceptance shall not constitute acceptance by the Port of unauthorized or defective Work, and the Port shall not be prevented from requiring the Contractor to remove, replace, repair, or dispose of unauthorized or defective Work or recovering damages due to the same.
- C. Completion of Work under RCW 60.28. Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance.

6.07 PORT'S RIGHT TO USE THE PREMISES

- A. Port has right to use and occupy Work. The Port reserves the right to occupy or use any part of the Work before or after Substantial Completion of some or all of the Work without relieving the Contractor of any of its obligations under the Contract. Such occupancy or use shall not constitute acceptance by the Port of any of the Work, and shall not cause any insurance to be canceled or lapse.
- B. No compensation due if Port elects to use and occupy Work. No additional compensation shall be due to the Contractor as a result of the Port's use or occupancy of the Work or a designated portion.

ARTICLE 7 - PAYMENT

7.01 ALL PAYMENTS SUBJECT TO APPLICABLE LAWS AND SCHEDULE OF VALUES

- A. Payment of the Contract Sum. The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Port to the Contractor for performance of the Work under the Contract Documents. Payments made to the Contractor are subject to all laws applicable to the Port and the Contractor. Payment of the Contract Sum constitutes full compensation to the Contractor for performance of the Work, including all risk, loss, damages, or expense of whatever character arising out of the nature or prosecution of the Work. The Port is not obligated to pay for extra work or materials furnished without prior written approval of the Port.
- B. Schedule of Values. All payments will be based upon an approved Schedule of Values. Prior to submitting its first Application for Payment, the Contractor shall submit a Schedule of Values to the Port allocating the entire Contract Sum to the various portions of the Work. The Schedule of Values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Port may require. This schedule, unless objected to by the Port, shall be used as a basis for reviewing the Contractor's applications for payment.

7.02 APPLICATIONS FOR PAYMENT

- A. Applications for Payment. Progress payments will be made monthly for Work duly certified, approved by the Engineer, and performed (based on the Schedule of Values and actual quantities of Work performed) during the calendar month preceding the Application for Payment. These amounts are paid in trust to the Contractor for distribution to Subcontractors to the extent and in accordance with the approved Application for Payment.

7.03 PROGRESS PAYMENTS

- A. Progress payments. Following receipt of a complete Application for Payment, the Engineer will either authorize payment or indicate in writing to the Contractor the specific reasons why the payment request is being denied, in whole or in part, and the remedial action the Contractor must take to receive the withheld amount. After a complete Application for Payment has been received and approved by the Port, payment will be made within thirty (30) days. Any payments made by, or through, or following receipt of payment from third parties will be made in accordance with the third party's policies and procedures.
- B. Port may withhold payment. The Port may withhold payment in whole or in part as provided in the Contract Documents or to the extent reasonably necessary to protect the Port from loss or potential loss for which the Contractor is responsible, including loss resulting from the Contractor's acts and omissions.

7.04 PAYMENT BY CONTRACTOR TO SUBCONTRACTORS

- A. Payment to Subcontractors. With each Application for Payment, the Contractor shall provide a list of Subcontractors to be paid by the Contractor. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason. If, however, after submitting an Application for Payment but before paying a Subcontractor, the Contractor discovers that part or all of a payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the subcontract (such as for unsatisfactory performance or non-payment of lower-tier Subcontractors), the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor and the Port written notice of the remedial actions that must be taken and pay the Subcontractor within eight (8) working days after the Subcontractor satisfactorily completes the remedial action identified in the notice.
- B. Payment certification to be provided upon request. The Contractor shall provide with each Application for Payment a certification signed by Contractor attesting that all payments by the Contractor to Subcontractors from the last Application for Payment were made within ten (10) days of the Contractor's receipt of payment. The certification will also attest that the Contractor will make payment to Subcontractors for the current Application for Payment within ten (10) days of receipt of payment from the Port.

7.05 FINAL PAYMENT

- A. Final payment. Final applications for payment are due within seven (7) days following Final Completion. Final payment of the unpaid balance of the Contract Sum, except retainage, will be made following Final Completion and within thirty (30) days of the Contractor's submission of an approved final Application for Payment.
- B. Releases required for final payment. The final payment shall not become due until the Contractor delivers to the Port a complete release of all liens arising out of the Contract, as well as an affidavit stating that, to the best of Contractor's knowledge, its release includes all labor and materials for which a lien could be filed. If a Subcontractor of any tier refuses to furnish a release or waiver required by the Port, the Port may (a) retain in the fund, account, or escrow funds in such amount as to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount, or (b) accept a bond from the Contractor, satisfactory to the Port, to indemnify the Port against the lien. If any such lien remains unsatisfied after all payments from the retainage are made, the Contractor shall refund to the Port all moneys that the Port may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

- C. Contractor to hold Port harmless from liens. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port from any liens, claims, demands, lawsuits, losses, damages, disbursements, liabilities, obligations, fines, penalties, costs and expenses, whether direct, indirect, including but not limited to attorneys' fees and consultants' fees and other costs and expenses, except to the extent a lien has been filed because of the failure of the Port to make a contractually required payment.

7.06 RETAINAGE

- A. Retainage to be withheld. In accordance with RCW 60.28, a sum equal to five percent (5%) of each approved Application for Payment shall be retained. Prior to submitting its first Application for Payment, the Contractor shall exercise one of the options listed below:
1. Retained percentages will be retained by the Port in a fund; or
 2. Deposited by the Port in an interest-bearing account in a bank, mutual savings bank or savings and loan association; or
 3. Placed in escrow with a bank or trust company; or
 4. If the Contractor provides a bond in place of retainage, it shall be in an amount equal to 5% of the Contract Sum plus Change Orders. The retainage bond shall be based on the form furnished in Section 00 61 23 or otherwise acceptable to the Port and duly completed and signed by a licensed surety or sureties registered with the Washington State Insurance Commissioner and on the currently authorized insurance list published by the Washington State Insurance Commissioner. The surety or sureties must be rated at least A minus, FSC(6), or higher by A.M. Best Rating Guide and be authorized by the Federal Department of the Treasury. Attorneys-in-fact who sign the retainage bond must file with each bond a certified and effective Power of Attorney statement.
- B. Contractor may withhold retainage from Subcontractors. The Contractor or a Subcontractor may withhold not more than five percent (5%) retainage from the monies earned by any Subcontractor or lower-tier Subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds. If requested by the Port, the Contractor shall specify the amount of retainage and interest due a Subcontractor.
- C. Release of retainage. Retainage will be withheld and applied by the Port in a manner required by RCW 60.28 and released in accordance with the Contract Documents and statutory requirements. Release of the retainage will be processed in the ordinary course of business within sixty (60) days following Final Acceptance of the Work by the Port provided that no notice of lien has been given as provided in RCW 60.28, that no claims have been brought to the attention of the Port, that the Port has no claims under this Contract, and that release of retention has been duly authorized by the State. The following items must also be obtained prior to release of retainage: pursuant to RCW 60.28, a certificate from the Department of Revenue; pursuant to RCW 50.24, a certificate from the Department of Employment Security; and appropriate information from the Department of Labor and Industries including approved affidavits of wages paid for the Contractor and each subcontractor.

7.07 DISPUTED AMOUNTS

- A. Disputed amounts. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may submit to the Port along with the approved Application for Payment, a separate written payment request specifying the exact additional amount claimed to be due, the category in the Schedule of Values to which the payment would apply, the specific Work for which additional payment is sought, and an explanation of why the Contractor believes additional payment is due.

7.08 EFFECT OF PAYMENT

- A. Payment does not relieve Contractor of obligations. Payment to the Contractor of progress payments or final payment does not relieve the Contractor from its responsibility for the Work or its responsibility to repair, replace, or otherwise make good defective Work, materials or equipment. Likewise, the making of a payment does not constitute a waiver of the Port's right to reject defective or non-conforming Work, materials, or equipment (even though they are covered by the payment), nor is it a waiver of any other rights of the Port.
- B. Acceptance of final payment waives claims. Acceptance of final payment by the Contractor, a Subcontractor of any tier or a supplier shall constitute a waiver of claims except those previously made in writing and identified as unsettled in Contractor's final Application for Payment.
- C. Execution of Change Order waives claims. The execution of a Change Order shall constitute a waiver of claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order.

7.09 LIENS

- A. Contractor to discharge liens. The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors of any tier).

ARTICLE 8 - CHANGES IN THE WORK

8.01 CHANGES IN THE WORK

- A. Changes in the Work authorized. Without invalidating the Contract and without notice to the Contractor's surety, the Port may authorize changes in the Work after execution of the Contract, including changes in the Contract Sum or Contract Time. Changes shall occur solely by Change Order, Unilateral Change Directive, or Minor Change in Work. All changes in the Work are effective immediately and the Contractor shall proceed promptly to perform the change, unless otherwise provided in the Change Order or Directive.
- B. Changes in the Work Defined.
 - 1. A Change Order is a written instrument signed by the Port and Contractor stating their agreement to a change in the Work and the adjustment, if any, in the Contract Sum and/or Contract Time.
 - 2. A Unilateral Change Directive is a written instrument issued by the Port to transmit new or revised Drawings, issue additions or modifications to the Contract, furnish other direction and documents adjustment, if any, to the Contract Sum and/or Contract Time. A Unilateral Change Directive is signed only by the Port, without requiring the consent or signature of the Contractor.
 - 3. A Minor Change in the Work is a written order from the Port directing a change that does not involve an adjustment to the Contract Sum or the Contract Time.
- C. Request for Proposal: At any time, the Port may issue a Proposal Request directing the Contractor to propose a change to the Contract Sum and/or Contract Time, if any, based on a proposed change in the Work. The Contractor shall submit a responsive Change Order proposal as soon as possible and no later than fourteen (14) days after receipt in which the Contractor specifies in good faith the extent to which the Contract Sum and/or Contract Time would change. All cost components shall be limited to the manner described in Section 8.02(B).

If the Contractor fails to timely respond to a Proposal Request, the Port may issue the change as a Unilateral Change Directive.

1. Fixed price method is default for Contractor Change Order proposal. When the Port has requested that the Contractor submit a Change Order proposal, the Port may specify the basis on which the Contract Sum will be adjusted by the Contractor. The Engineer's preference, unless otherwise indicated, is for changes in the Work to be priced using Lump Sums or Unit Prices or on a time and material (Force Account) basis if unit pricing or lump sums cannot be negotiated or determined. In all instances, however, proposed changes shall include a not-to-exceed price for the change and shall be itemized for evaluation purposes in accordance with Section 8.02(B), as requested by the Engineer.
 2. The Port may accept or reject the Contractor's Change Order proposal, request further documentation, or negotiate acceptable terms with the Contractor. If The Port and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order.
 3. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment. The Port may reject a proposal, in which case the Port may either not effectuate the change or issue a Unilateral Change Directive. The Port will not make payment to the Contractor for any work until that work has been incorporated into an executed Change Order.
- D. Unforeseen Conditions: If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or any soils reports made available by the Port to the Contractor or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall immediately provide oral notice to the Engineer before conditions are disturbed, followed within 24 hours by an initial written notice. The Contractor shall submit a detailed proposal no later than seven (7) days following discovery of differing site conditions. The Engineer will promptly investigate these conditions and, if the Engineer determines that they differ materially and cause an increase or decrease in the Contractor's cost or time required for, performance of any part of the Work, will establish a change in the Contract Sum or Contract Time, or both, consistent with the requirements of the Contract Documents. If the Contractor disputes the Engineer's determination, the Contractor may proceed as provided in the dispute resolution procedure (Article 11). No increase to the Contract Sum or the Contract Time shall be allowed if the Contractor does not comply with the contractual requirements or if the Contractor knew or reasonably should have known of the concealed conditions prior to executing the Contract.
- E. Proceed Immediately: Pending agreement on the terms of the Change Order or upon determination of a differing site condition as defined in 8.01(D), the Engineer may direct Contractor to proceed immediately with the change in the Work. Contractor shall not proceed with any change in the Work until it has obtained the Engineer's written approval and documentation of the following:
1. The scope of work
 2. An agreed upon maximum not-to-exceed amount

3. The method of final cost determination
 4. Estimated time to complete the changed work.
 5. As a change in the Work is performed, unless the parties have signed a written Change Order to establish the cost of the change, the Contractor shall maintain an itemized accounting of all costs related to the change based on the categories in Section 8.02(B) and provide such data to the Port upon request. This includes, without limitation, invoices, including freight and express bills, and other support for all material, equipment, Subcontractor, and other charges related to the change and, for material furnished from the Contractor's own inventory, a sworn affidavit certifying the actual cost of such material. Failure to provide data to the Port within seven (7) days of a request constitutes a waiver of any claim. The Port may furnish any material or equipment to the Contractor that it deems advisable, and the Contractor shall have no claim for any costs or fee on such material or equipment.
- F. Procedure for Unilateral Change Directive. Whether or not the Port has rejected a Contractor's proposal, the Port may issue a Unilateral Change Directive and the Contractor shall promptly proceed with the specified Work. If the Contractor disagrees with a Unilateral Change Directive, the Contractor shall advise the Port in writing through a Change Order proposal within seven (7) days of receipt. The Contractor's Change Order proposal shall reasonably specify the reasons for any disagreement and the adjustment it proposes. Without this timely Change Order proposal, the Contractor shall conclusively be deemed to have accepted the Port's proposal.
- G. Payment pending final determination of Force Account work. Pending final determination of the total cost of Force Account Work, and provided that the Work to be performed under Force Account is complete and any reservations of rights have been signed by the Port, the Contractor may request payment for amounts not in dispute in the next Application for Payment accompanied by documentation indicating the parties' agreement. Work done on a Force Account basis must be approved in writing on a daily basis by the Engineer or the Engineer's designee and invoices shall be submitted with an Application for Payment within sixty (60) days of performance of the Work.

8.02 CHANGES IN THE CONTRACT SUM

- A. Port to Decide How Changes are Measured. The Port may elect, in its sole discretion, how changes in the Work will be measured for payment. Change in the Work may be priced on a lump sum basis, through Unit Prices, as Force Account, or by another method documented in the executed Change Order, Unilateral Change Directive or Minor Change in the Work.
- B. Determination of Cost of Change. The total cost of any change in the Work, including a claim under Article 11, shall not exceed the prevailing cost for the Work in the locality of the Project. In all circumstances, the change in the Work shall be limited to the reasonable, actual cost of the following components:
1. Direct labor costs: These are the actual labor costs determined by the number of additional craft hours at their normal hourly rate necessary to perform a change in the Work. The hourly cost of labor will be based upon the following:
 - a. Basic wages and fringe benefits: The hourly wage (without markup or labor burden) and fringe benefits paid by the Contractor as established by the Washington Department of Labor and Industries or contributed to labor trust funds as itemized fringe benefits, whichever is applicable, not to exceed that specified in the applicable "Intent to Pay Prevailing Wage," for the laborers, apprentices, journeymen, and foremen performing or directly supervising the change in the Work on site. These wages do not include the cost of Contractor's project manager or superintendent or

above, and the premium portion of overtime wages is not included unless pre-approved in writing by the Port. Costs paid or incurred by the Contractor for vacations, per diem, subsistence, housing, travel, bonuses, stock options, or discretionary payments to employees are not separately reimbursable. The Contractor shall provide to the Port copies of payroll records, including certified payroll statements for itself and Subcontractors of any tier, upon the Port's request.

- b. Workers' insurance: Direct contributions to the State of Washington as industrial insurance; medical aid; and supplemental pension by class and rates established by the Washington Department of Labor and Industries.
 - c. Federal insurance: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).
- 2. Direct material costs: This is an itemization, including material invoices, of the quantity and actual cost of additional materials necessary to perform the change in the Work. The cost will be the net cost after all discounts or rebates, freight costs, express charges, or special delivery costs, when applicable. No lump sum costs will be allowed unless approved in advance by the Port.
 - 3. Construction equipment usage costs: This is an itemization of the actual length of time that construction equipment necessary and appropriate for the Work is used solely on the changed Work times the applicable rental cost as established by the lower of the local prevailing rates published in www.equipmentwatch.com, as modified by the AGC/WSDOT agreement, or the actual rate paid to an unrelated third party. If more than one rate is applicable, the lowest available rate will be utilized. Rates and quantities of equipment rented that exceed the local fair market rental costs shall be subject to the Port's prior written approval. Total rental charges for equipment or tools shall not exceed 75% of the fair market purchase value of the equipment or the tool. Actual, reasonable mobilization costs are permitted if the equipment is brought to the site solely for the change in the Work. Mobilization and standby costs shall not be charged for equipment already present on the site.

The rates in effect at the time of the performance of the changed Work are the maximum rates allowable for equipment of modern design and in good working condition and include full compensation for furnishing all fuel, oil, lubrication, repairs, maintenance, and insurance. No gas surcharges are payable. Equipment not of modern design and/or not in good working condition will have lower rates. Hourly, weekly, and/or monthly rates, as appropriate, will be applied to yield the lowest total cost.
 - 4. Subcontractor costs: These are payments the Contractor makes to Subcontractors for changed Work performed by Subcontractors. The Subcontractors' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02 and, among other things, shall not include consultant costs, attorneys' fees, or claim preparation expenses.
 - 5. Service provider costs: These are payments the Contractor makes to service providers for changed Work performed by service providers. The service providers' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02.
 - 6. Markup: This is the maximum total amount for overhead, profit and other costs, including office, home office and site overhead (including purchasing, project manager, superintendent, project engineer, estimator, and their vehicles and clerical assistants), taxes (except for sales tax on the Contract Sum), warranty, safety costs, printing and

copying, layout and control, quality control/assurance, small or hand tools (a tool that costs \$500 or less and is normally furnished by the performing contractor), preparation of as-built drawings, impact on unchanged Work, Change Order and/or claim preparation, and delay and impact costs of any kind (cumulative, ripple, or otherwise), added to the total cost to the Port of any Change Order work. No markup shall be due, however, for direct settlements of Subcontractor claims by the Port after Substantial Completion. The markup shall be limited in all cases to the following schedule:

- a. Direct labor costs -- 20% markup on the direct cost of labor for the party (Contractor or Subcontractor) providing labor related to the change in the Work;
- b. Direct material costs -- 20% markup on the direct cost of material for the party (Contractor or Subcontractor) providing material related to the change in the Work;
- c. Construction equipment usage costs -- 10% markup on the direct cost of equipment for the party (Contractor or Subcontractor) providing equipment related to the change in the Work;
- d. Contractor markup on Subcontractor costs -- 10% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by Subcontractors (and for Subcontractors, for a change in the Work performed by lower-tier Subcontractors); and
- e. Service provider costs -- 5% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by service providers.

The total summed markup of the Contractor and all Subcontractors of any tier shall not exceed 30% of the direct costs of the change in the Work. If the markup would otherwise exceed 30%, the Contractor shall proportionately reduce the markup for the Contractor and all Subcontractors of any tier.

7. Cost of change in insurance or bond premium. This is defined as:

- a. Contractor's liability insurance: The actual cost (expressed as a percentage submitted with the certificate of insurance provided under the Contract Documents and subject to audit) of the Contractor's liability insurance arising directly from the changed Work; and
- b. Public works bond: The actual cost (expressed as a percentage submitted under the Contract Documents and subject to audit) of the Contractor's performance and payment bond arising directly from the changed Work.

Upon request, the Contractor shall provide the Port with supporting documentation from its insurer or surety of any associated cost incurred. The cost of the insurance or bond premium together shall not exceed 2.0% of the cost of the changed Work.

8. Unit Prices. If Unit Prices are specified in the Contract Documents or established by agreement of the parties for certain Work, the Port may apply them to the changed Work. Unit Prices shall include pre-agreed rates for material quantities and shall include reimbursement for all direct and indirect costs of the Work, including overhead, profit, bond, and insurance costs arising out of or related to the Unit Priced item. Quantities must be supported by field measurement statements signed by the Port, and the Port shall have access as necessary for quantity measurement. The Port shall not be responsible for not-to-exceed limit(s) without its prior written approval.

8.03 CHANGES IN THE CONTRACT TIME

- A. Extension of the Contract Time. If the Contractor is delayed at any time in the commencement or progress of the Work by events for which the Port is responsible, by unanticipated abnormal weather (subject to Section 8.03(E) below), or by other causes not the fault or responsibility of the Contractor that the Port determines may justify a delay in the Contract Time, then the Contract Time shall be extended by Change Order for such reasonable time as the Port may determine. In no event, however, shall the Contractor be entitled to any extension of time absent proof of (1) delay to an activity on the critical path of the Project, or (2) delay transforming an activity to the critical path, so as to actually delay the anticipated date of Substantial Completion.
- B. Allocation of responsibility for delay not caused by Port or Contractor. If a delay was not caused by the Port, the Contractor, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time but not an increase in the Contract Sum.
- C. Allocation of responsibility for delay caused by Port. If a delay was caused by the Port or someone acting on behalf of the Port and affected the critical path, the Contractor shall be entitled to a change in the Contract Time and Contract Sum in accordance with Section 8.02. The Contractor shall not recover damages, an equitable adjustment or an increase in the Contract Sum or Contract Time from the Port, however, where the Contractor could reasonably have avoided the delay. The Port is not obligated directly or indirectly for damages for any delay suffered by a Subcontractor of any tier that does not increase the Contract Time.
- D. Allocation of responsibility for delay caused by Contractor. If a delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.
- E. Adverse weather. If adverse weather is identified as the basis for a claim for additional time, the claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not reasonably have been anticipated and had an adverse effect on the critical path of construction, and that the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather. For a claim based on adverse weather, the Contractor shall be eligible only for a change in the Contract Time (but not a change in the Contract Sum) if the Contractor can substantiate that there was significantly greater than normal inclement weather considering the full term of the Contract Time.
- F. Damages for delay. In the event the Contractor (including any Subcontractors of any tier) is held to be entitled to damages from the Port for delay beyond the amount permitted in Section 8.02(B), the total combined damages to the Contractor and any Subcontractors of any tier for each day of delay shall be limited to the same daily liquidated damage rate specified in the Contract Documents due the Port for the Contractor's delay in achieving Substantial Completion. By submitting a bid on the Work and executing the Contract, the Contractor represents that these liquidated damages are a reasonable estimate of its loss.
- G. Limitation on damages. The Contractor shall not be entitled to damages arising out of loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant under run; trade stacking; reassignment of workers; rescheduling of Work, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended or increased overhead or general conditions; profit upon damages for delay; impact damages including cumulative impacts; or similar damages. Any effect that such alleged costs may have upon the Contractor or its Subcontractors of any

tier is fully compensated through the markup on Change Orders paid through Section 8.02(B) and any liquidated damages paid hereunder.

8.04 RESERVATION OF RIGHTS

- A. Reservations of rights void unless signed by Port. Reservations of rights will be deemed waived and are void unless any reserved rights are described in detail and are signed by the Contractor and the Port.
- B. Procedure for unsigned reservations of rights. If the Contractor adds a reservation of rights not signed by the Port to any Change Order, Unilateral Change Directive, Change Order proposal, Application for Payment or any other document, all amounts and all Work therein shall be considered disputed and not payable until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and signed by the Port. If the Port makes payment based on a document that contains a reservation of rights not signed by the Port, and if the Contractor cashes such payment, then the reservation of rights shall be deemed waived, withdrawn and of no effect.

8.05 UNIT PRICES

- A. Adjustment to Unit Prices. If Unit Prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed (less than eighty percent (80%) or more than one hundred and twenty percent (120%) of the quantity estimated) so that application of a Unit Price would be substantially unfair, the applicable Unit Price but not the Contract Time shall be adjusted if the Port prospectively approves a Change Order revising the Unit Price.
- B. Procedure to change Unit Prices. The Contractor or Port may request a Change Order revising a Unit Price by submitting information to support the change. A proposed change to a Unit Price will be evaluated by the Port based on the change in cost resulting solely from the change in quantity, any change in production rate or method as compared to the original plan, and the share, if any, of fixed expenses properly chargeable to the item. If the Port and Contractor agree on the change, a Change Order will be executed. If the parties cannot agree, the Contractor shall comply with the dispute resolution procedures (Article 11).

ARTICLE 9 - SUSPENSION AND TERMINATION OF CONTRACT

9.01 PORT'S RIGHT TO SUSPEND WORK

- A. Port may suspend the Work. The Port may at any time suspend the Work, or any part thereof, by giving notice to the Contractor. The Work shall be resumed by the Contractor as soon as possible, but no later than fourteen (14) days after the date fixed in a notice to resume the Work. The Port shall reimburse the Contractor for appropriate and reasonable expenses consistent with Section 8.02 incurred by the Contractor as a result of the suspension, except where a suspension is the result of the Contractor repeatedly or materially failing to carry out or correct the Work in accordance with the Contract Documents, and the Contractor shall take all necessary steps to minimize expenses.
- B. Contractor obligations. During any suspension of Work, the Contractor shall take every precaution to prevent damage to, or deterioration of, the Work. The Contractor shall be responsible for all damage or deterioration to the Work during the period of suspension and shall, at its sole expense, correct or restore the Work to a condition acceptable to the Port prior to resuming Work.

9.02 TERMINATION OF CONTRACT FOR CAUSE BY THE PORT

- A. Port may terminate for cause. If the Contractor is adjudged bankrupt or makes a general assignment for the benefit of the Contractor's creditors, if a receiver is appointed due to the Contractor's insolvency, or if the Contractor, in the opinion of the Port, persistently or materially refuses or fails to supply enough properly skilled workmen or materials for proper completion of the Contract, fails to make prompt payment to Subcontractors or suppliers for material or labor, disregards laws, ordinances, or the instructions of the Port, fails to prosecute the Work continuously with promptness and diligence, or otherwise materially violates any provision of the Contract, then the Port, without prejudice to any other right or remedy, may terminate the Contractor after giving the Contractor seven (7) days' written notice (during which period the Contractor shall have the right to cure).
- B. Procedure following termination for cause. Following a termination for cause, the Port may take possession of the Project site and all materials and equipment, and utilize such materials and equipment to finish the Work. The Port may also exclude the Contractor from the Project site(s). If the Port elects to complete all or a portion of the Work, it may do so as it sees fit. The Port shall not be required to accept the lowest bid for completion of the Work and may choose to complete all or a portion of the Work using its own work force. If the Port elects to complete all or a portion of the Work, the Contractor shall not be entitled to any further payment until the Work is finished. If the expense of finishing the Work, including compensation for additional managerial and administrative services of the Port, exceeds the unpaid balance of the Contract Sum, the excess shall be paid by the Contractor.
- C. Port's remedies following termination for cause. The Port may exercise any rights, claims or demands that the Contractor may have against third persons in connection with the Contract, and for this purpose the Contractor assigns and transfers to the Port all such rights, claims and demands.
- D. Inadequate termination for cause converted to termination for convenience. If, after the Contractor has been terminated for cause, it is determined that inadequate "cause" for such termination exists, then the termination shall be considered a termination for convenience pursuant to Section 9.03.

9.03 TERMINATION OF CONTRACT FOR CONVENIENCE BY THE PORT

- A. Port may terminate for convenience. The Port may, at any time (without prejudice to any right or remedy of the Port), terminate all or any portion of the Contract for the Port's convenience and without cause. The Contractor shall be entitled to receive payment consistent with the Contract Documents only for Work properly executed through the date of termination, and costs necessarily incurred by reason of the termination (such as the cost of settling and paying claims arising out of the termination under subcontracts or orders), along with a fee of one percent (1%) of the Contract Sum not yet earned on the whole or part of the Work. The total amount to be paid to the Contractor shall not exceed the Contract Sum as reduced by the amount of payments otherwise made. The Port shall have title to all Work performed through the date of termination.

9.04 TERMINATION OF CONTRACT BY THE CONTRACTOR

- A. Contractor may terminate for cause. The Contractor may terminate the Contract if the Work is stopped for a period of sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor of any tier, for either of the following reasons:
 - 1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or

2. An act of government, such as a declaration of national emergency that requires all Work to be stopped.
- B. Procedure for Contractor termination. If one of the reasons described in Section 9.04A exists, the Contractor may, upon seven (7) days' written notice to the Port (during which period the Port has the opportunity to cure), terminate the Contract and recover from the Port payment for Work executed through the date of termination in accordance with the Contract Documents and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on Work executed and direct costs incurred by reason of such termination. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.
- C. Contractor may stop the Work for failure of Port to pay undisputed amounts. The Contractor may stop Work under the Contract if the Port does not pay undisputed amounts due and owing to the Contractor within fifteen (15) days of the date established in the Contract Documents. If the Port fails to pay undisputed amounts, the Contractor may, upon fifteen (15) additional days' written notice to the Port, during which the Port can cure, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately, and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up.

9.05 SUBCONTRACT ASSIGNMENT UPON TERMINATION

- A. Subcontracts assigned upon termination. Each subcontract is hereby assigned by the Contractor to the Port provided that:
 1. The Port requests that the subcontract be assigned;
 2. The assignment is effective only after termination by the Port and only for those subcontracts that the Port accepts in writing; and
 - a. The assignment is subject to the prior rights of the surety, if any, under any bond issued in accordance with the Contract Documents.

When the Port accepts the assignment of a subcontract, the Port assumes the Contractor's rights and obligations under the subcontract, but only for events and payment obligations that arise after the date of the assignment.

ARTICLE 10 - BONDS

10.01 CONTRACTOR PERFORMANCE AND PAYMENT BONDS

- A. Contractor to furnish performance and payment bonds. Within ten (10) days following its receipt of a notice of award, and as part of the Contract Sum, the Contractor shall secure and furnish duly executed performance and payment bonds using the forms furnished by the Port. The bonds shall be executed by a surety (or sureties) reasonably acceptable to the Port, admitted and licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A minus, FSC (6)" or better and be authorized by the U.S. Department of the Treasury. Pursuant to RCW 39.08, the bonds shall be in an amount equal to the Contract Sum, and shall be conditioned only upon the faithful performance of the Contract by the Contractor within the Contract Time and upon the payment by the Contractor of all taxes, fees, and penalties to the State of Washington and all laborers, Subcontractors, and suppliers, and others who supply provisions, equipment, or supplies for the performance of the Work covered by this Contract. The bonds shall be signed by the person or persons legally authorized to bind the Contractor.

- B. Port may notify surety. If the Port makes or receives a claim against the Contractor, the Port may, but is not obligated to, notify the Contractor's surety of the nature and amount of the claim. If the claim relates to a possibility of a Contractor's default, the Port may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

ARTICLE 11 - DISPUTE RESOLUTION

11.01 NOTICE OF PROTEST AND CLAIM

- A. Dispute resolution procedure mandatory. All claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, shall be decided exclusively by the following alternative dispute resolution procedure unless the parties mutually agree otherwise. If the Port and Contractor agree to a partnering process to assist in the resolution of disputes, the partnering process shall occur prior to, and not be in place of, the mandatory dispute resolution procedures set forth below.
- B. Notice of protest defined. Except for claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall provide immediate oral notice of protest to the Engineer prior to performing any disputed Work and shall submit a written notice of protest to the Port within seven (7) days of the occurrence of the event giving rise to the protest that includes a clear description of the event(s). The protest shall identify any point of disagreement, those portions of the Contract Documents believed to be applicable, and an estimate of quantities and costs involved. When a protest relates to cost, the Contractor shall keep full and complete records and shall permit the Port to have access to those records at any time as requested by the Port.
- C. Claim defined. A claim is a demand by one of the parties seeking adjustment or interpretation of the Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract Documents. The term "claim" also includes all disputes and matters in question between the Port and Contractor arising out of or relating to the Contract Documents. Claims must be initiated in writing and include a detailed factual statement and clear description of the claim providing all necessary dates, locations and items of Work, the date or dates on which the events occurred that give rise to the claim, the names of employees or representatives knowledgeable about the claim, the specific provisions of the Contract Documents that support the claim, any documents or oral communications that support the claim, any proposed change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path), and all other data supporting the claim. Claims shall also be submitted with a statement certifying, under penalty of perjury, that the claim as submitted is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the claim is fully supported, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes the Port is liable. A claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor and Subcontractors of any tier are entitled and may not contain reservations of rights without the Port's written approval; any unapproved reservations of rights shall be without effect.
- D. Claim procedure. The Contractor shall submit a written claim within thirty (30) days of providing written notice of protest. The Contractor may delay submitting supporting data by an additional thirty (30) days if it notifies the Port in its claim that substantial data must be assembled. Any claim of a Subcontractor of any tier may be brought only through, and after review by and concurrence of, the Contractor.
- E. Failure to comply with notice of protest and claim requirements waives claims. Any notice of protest by the Contractor and any claim of the Contractor, whether under the Contract or

otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract. Failure to properly and timely submit a notice of protest or to timely submit a claim shall waive the claim. No act, omission, or knowledge, actual or constructive, of the Port shall waive the requirement for timely written notice of protest and a timely written claim unless the Port and the Contractor sign an explicit, unequivocal written waiver approved by the Port. The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices of protest and/or timely submit claims has a substantial impact upon and prejudices the Port. For the purpose of calculating time periods, an "event giving rise to a claim," among other things, is not a Request for Information but rather is a response that the Contractor believes would change the Contract Sum and/or Contract Time.

- F. False claims. The Contractor shall not make any fraudulent misrepresentations, concealments, errors, omissions, or inducements to the Port in the formation or performance of the Contract. If the Contractor or a Subcontractor of any tier submits a false or frivolous claim to the Port, which for purposes of this Section 11.01(F) is defined as a claim based in whole or in part on a materially incorrect fact, statement, representation, assertion, or record, the Port shall be entitled to collect from the Contractor by offset or otherwise (without prejudice to any right or remedy of the Port) any and all costs and expenses, including investigation and consultant costs, incurred by the Port in investigating, responding to, and defending against the false or frivolous claim.
- G. Compliance with lien and retainage statutes required. If a claim relates to or is the subject of a lien or retainage claim, the party asserting the claim may proceed in accordance with applicable law to comply with the notice and filing deadlines prior to resolution of the claim by mediation or by litigation.
- H. Performance required pending claim resolution. Pending final resolution of a claim, the Contractor shall continue to perform the Contract and maintain the Progress Schedule, and the Port shall continue to make payments of undisputed amounts due in accordance with the Contract Documents.

11.02 MEDIATION

- A. Claims must be subject to mediation. At any time following the Port's receipt of a written claim, the Port may require that an officer of the Contractor and the Port's designee (all with authority to settle) meet, confer, and attempt to resolve a claim. If the claim is not resolved during this meeting, the claim shall be subject to mandatory mediation as a condition precedent to the initiation of litigation. This requirement can be waived only by an explicit, written waiver signed by the Port and the Contractor.
- B. Mediation procedure. A request for mediation shall be filed in writing with the other party to the Contract, and the parties shall promptly attempt to agree upon a mediator. If the parties have not reached agreement within thirty (30) days of the request, either party may file the request with the American Arbitration Association or such other alternative dispute resolution service to which the parties mutually agree, with a copy to the other party, and the mediation shall be administered by the American Arbitration Association (or other agreed service). The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in Pierce County, Washington unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof. Unless the Port and the Contractor mutually agree in writing otherwise, all claims shall be considered at a mediation session that shall occur prior to Final Completion.

11.03 LITIGATION

- A. Claims not resolved by mediation are subject to litigation. Claims not resolved through mediation shall be resolved by litigation unless the parties mutually agree otherwise. The venue for any litigation shall be Pierce County, Washington. The Contractor may bring no litigation on claims unless such claims have been properly raised and considered in the procedures of this Article 11. The Contractor must demonstrate in any litigation that it complied with all requirements of this Article.
- B. Litigation must be commenced promptly. All unresolved claims of the Contractor shall be waived and released unless the Contractor has complied with the requirements of the Contract Documents, and litigation is served and filed within 180 days of the date of Substantial Completion approved in writing by the Port or termination of the Contract. The pendency of mediation (the time period between receipt by the non-requesting party of a written mediation request and the date of mediation) shall toll these deadlines until the earlier of the mediator providing written notice to the parties of impasse or thirty (30) days after the date of the mediation session.
- C. Port not responsible for attorneys' fees. Neither the Contractor nor a Subcontractor of any tier, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from the Port (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law).
- D. Port may join Contractor in dispute. The Port may join the Contractor as a party to any litigation or arbitration involving the alleged fault, responsibility, or breach of contract of the Contractor or Subcontractor of any tier.

ARTICLE 12 - MISCELLANEOUS

12.01 GENERAL

- A. Rights and remedies are cumulative. The rights and remedies of the Port set forth in the Contract Documents are cumulative and in addition to and not in limitation of any rights and remedies otherwise available to the Port. The pursuit of any remedy by the Port shall not be construed to bar the Port from the pursuit of any other remedy in the event of similar, different, or subsequent breaches of this Contract. All such rights of the Port shall survive completion of the Project or termination of the Contractor.
- B. Reserved rights do not give rise to duty. The rights reserved or possessed by the Port to take any action shall not give rise to a duty for the Port to exercise any such right.

12.02 WAIVER

- A. Waiver must be in writing and authorized by Port. Waiver of any provisions of the Contract Documents must be in writing and authorized by the Port. No other waiver is valid on behalf of the Port.
- B. Inaction or delay not a waiver. No action, delay in acting, or failure to act by the Port shall constitute a waiver of any right or remedy of the Port, or constitute an approval or acquiescence of any breach or defect in the Work. Nor shall any delay or failure of the Port to act waive or otherwise prejudice the right of the Port to enforce a right or remedy at any subsequent time.
- C. Claim negotiation not a waiver. The fact that the Port and the Contractor may consider, discuss, or negotiate a claim that has or may have been defective or untimely under the Contract shall not constitute a waiver of the provisions of the Contract Documents unless the Port and the Contractor sign an explicit, unequivocal waiver.

12.03 GOVERNING LAW

- A. Washington law governs. This Contract and the rights and duties of the parties hereunder shall be governed by the internal laws of the State of Washington, without regard to its conflict of law principles.

12.04 COMPLIANCE WITH LAW

- A. Contractor to comply with applicable laws. The Contractor shall at all times comply with all applicable Federal, State and local laws, ordinances, and regulations. This compliance shall include, but is not limited to, the payment of all applicable taxes, royalties, license fees, penalties, and duties.
- B. Contractor to provide required notices. The Contractor shall give notices required by all applicable Federal, State, and local laws, ordinances and regulations bearing on the Work.
- C. Contractor to confine operations at site to permitted areas. The Contractor shall confine operations at the Project site to areas permitted by applicable laws, ordinances, permits, rules and regulations, and lawful orders of public authorities and the Contract Documents.

12.05 ASSIGNMENT

- A. Assignment. The Port and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party and to the partners, successors, assigns and legal representatives of such other party. The Contractor may not assign, transfer, or novate all or any portion of the Contract, including but not limited to any claim or right to the Contract Sum, without the Port's prior written consent. If the Contractor attempts to make an assignment, transfer, or novation without the Port's consent, the assignment shall be of no effect, and Contractor shall nevertheless remain legally responsible for all obligations under the Contract. The Contractor also shall not assign or transfer to any third party any claims it may have against the Port arising under the Contract or otherwise related to the Project.

12.06 TIME LIMIT ON CAUSES OF ACTION

- A. Time limit on causes of action. The Port and Contractor shall commence all causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the dispute resolution procedure set forth in Article 11 of these General Conditions, within the time period specified by applicable law, and within the time limits identified in the Contract Documents. The Contractor waives all claims and causes of action not commenced in accordance with this Section 12.06.

12.07 SERVICE OF NOTICE

- A. Notice. Written notice under the Contract Documents by either the Contractor or Port may be served on the other party by personal service, electronic or facsimile transmission, or delivery service to the last address provided in writing to the other party. For the purpose of measuring time, notice shall be deemed to be received by the other party on the next business day following the sender's electronic or facsimile transmittal or delivery by delivery service.

12.08 RECORDS

- A. Contractor and Subcontractors to maintain records and cooperate with Port audit. The Contractor and Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, emails, and other tangible and electronic data and evidence relating or pertaining to costs and/or performance of the Contract ("records") to such extent and in such detail as will properly reflect and fully support compliance with the Contract Documents and with all costs, charges and other amounts of whatever nature. The Contractor shall preserve these records for a period of six (6) years following the date of Final

Acceptance under the Contract. Within seven (7) days of the Port's request, both during the Project and for six (6) years following Final Acceptance, the Contractor and Subcontractors of any tier shall make available at their office during normal business hours all records for inspection, audit and reproduction (including electronic reproduction) by the Port or its representatives; failure to fully comply with this requirement shall constitute a material breach of contract and a waiver of all claims by the Contractor and Subcontractors of any tier.

- B. Rights under RCW 42.56. The Contractor agrees, on behalf of itself and Subcontractors of any tier, that any rights under Chapter 42.56 RCW will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier, or their respective representatives, shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the Port.

12.09 STATUTES

- A. Contractor to comply with Washington statutes. The Contractor shall abide by the provisions of all applicable statutes, regulations, and other laws. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be and are not a complete list.
1. Pursuant to RCW 39.06, "Registration, Licensing of Contractors," the Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, "Registration of Contractors," and shall satisfy all State of Washington bonding and insurance requirements. The Contractor shall also have a current state unified business identifier number; have industrial insurance coverage for the Contractor's employees working in Washington as required by Title 51 RCW; have an employment security department number as required by Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW, and; not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).
 2. The Contractor shall comply with all applicable provisions of RCW 49.28, "Hours of Labor."
 3. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, "Discrimination."
 4. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92, "Provisions in Buildings for Aged and Handicapped Persons," and the Americans with Disabilities Act.
 5. Pursuant to RCW 50.24, "Contributions by Employers," in general and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for an acceptable bond.
 6. The Contractor shall comply with pertinent provisions of RCW 49.17, "Washington Industrial Safety and Health Act," and Chapter 296-155 WAC, "Safety Standards for Construction Work."
 7. Pursuant to RCW 49.70, "Worker and Community Right to Know Act," and WAC 296-62-054 et seq., the Contractor shall provide to the Port and have copies available at the Project site, a workplace survey or material safety data sheets for all "hazardous" chemicals under the control or use of Contractor or any Subcontractor of any tier.
 8. All products and materials incorporated into the Project as part of the Work shall be certified as "asbestos-free" and "lead-free" by United States standards, and shall also be free of all hazardous materials or substances. At the completion of the Project, the Contractor shall submit certifications of asbestos-free and of lead-free materials certifying

that all materials and products incorporated into the Work meet the requirements of this Section, and shall also certify that materials and products incorporated into the Work are free of hazardous materials and substances.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

- A. The provisions and intent of the Contract, including the General and Supplemental Conditions apply to this work as if specified in this section. Work related to this section is described throughout these Specifications.

1.02 SUBMITTAL REQUIREMENTS

- A. Evidence of the required insurance within 10 days of the issued Notice of Award to the Contractor.
- B. Updated evidence of insurance as required until final completion.

1.03 CONTRACTOR LIABILITY INSURANCE

- A. The Contractor shall secure and maintain until Final Completion, at its sole cost and expense, the following insurance in carriers reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC (6)" or better.
- B. The Port of Tacoma (Port) will be included as an additional insured(s) for both ongoing and completed operations by endorsement to the policy using ISO Form CG 20 10 11 85 or forms CG 20 10 03 97 and CG 20 37 10 01 (or equivalent coverage endorsements). The inclusion of the Port as an additional insured(s) shall not create premium liability for the Port.

Also, by endorsement to the policy, there shall be:

- 1. An express waiver of subrogation in favor of the Port;
 - 2. A cross liabilities clause,
 - 3. An endorsement stating that the Contractor's policy is primary and not contributory with any insurance carried by the Port.
- C. If the Contractor, Supplier or Subcontractor's will perform any work requiring the use of a licensed professional per RCW 18 the Contractor shall provide evidence to the Port of professional liability insurance in amounts not less than \$1,000,000.
 - D. This insurance shall cover all of the Contractors' operations of whatever nature connected in any way with the Contract, including any operations performed by the Contractor's Subcontractors of any tier. **It is the obligation of the Contractor to ensure that all Subcontractors (at whatever level) carry a similar program that provides the identified types of coverage, limits of liability, inclusion of the Port as additional insured(s), waiver of subrogation and cross liabilities clause.** The Port reserves the right to reject any insurance policy as to company, form, or substance. Contractor's failure to provide or the Port's acceptance of the Contractor's certificate of insurance does not waive the Contractor's obligation to comply with the insurance requirements of the Contract as specifically described below:
 - 1. Commercial General Liability Insurance on an Occurrence Form Basis including but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Contractual Liability;

- d. Products - Completed Operations Liability;
- e. Personal Injury Liability;

Alternatively, a Commercial General Liability (CGL) policy is acceptable if all of the above coverages are incorporated in the policy and there are no marine exclusions that will remove coverage for either vessels or work done by or above or around the water.

- 2. Comprehensive Automobile Liability including but not limited to:
 - a. Bodily Injury Liability;
 - b. Property Damage Liability;
 - c. Personal Injury Liability;
 - d. Owned and Non-Owned Automobile Liability; and
 - e. Hired and Borrowed Automobile Liability.
- E. Except where indicated above, the limits of all insurance required to be provided by the Contractor shall be not less than \$2,000,000 for each occurrence and \$2,000,000 in the aggregate. However, coverage in the amounts of these minimum limits shall not be construed as to relieve the Contractor from liability in excess of such limits. The Additional Insured endorsement shall NOT be limited to the amounts specified by this contract unless expressly waived in writing by the Port of Tacoma.
- F. Except where indicated above, the limits of all insurance required to be provided by the Contractor shall be not less than \$2,000,000 for each occurrence. However, coverage in the amounts of these minimum limits shall not be construed as to relieve the Contractor from liability in excess of such limits. The Additional Insured endorsement shall NOT be limited to the amounts specified by this contract unless expressly waived in writing by the Port.
- G. Contractor shall certify that its operations are covered by the Washington State Worker's Compensation Fund. The Contractor shall provide its Account Number or, if self-insured, its Certificate of Qualification Number. The Contractor shall also provide evidence of Stop-Gap Employers' Liability Insurance.

United States Longshoremen's and Harbor Worker's Act (USL&H) and Jones Act may be required for this project. The contractor shall be solely responsible for determining the applicability of USL&H and Jones Act coverage. The failure of the Contractor to procure either USL&H or Jones Act coverage shall at no time create liability on the part of the Port. The Contractor shall bear all responsibility and shall indemnify and hold harmless the Port for any and all liability, cost and/or damages.
- H. The Contractor shall furnish within ten (10) days following issuance of the Notice of Award a certificate of insurance satisfactory to the Port evidencing that insurance in the types and minimum amounts required by the Contract Documents has been secured. The Certificate of Insurance shall be signed by an authorized representative of the insurer together with a copy of the endorsement, which shows that the Port is named as additional insured.
- I. Contractor shall provide at least forty-five (45) days prior written notice to the Port of any termination or material change or ten (10) days notice in the case of non-payment of premium(s).
- J. If the Contractor is required to make corrections to the Work after Final Completion, the Contractor shall obtain at its own expense, prior to the commencement of any corrective work, insurance coverage as required by the Contract Documents, which coverage shall be maintained until the corrections to the Work have been completed and accepted by the Port.

1.04 BUILDER'S RISK INSURANCE

- A. Until Final Completion of the Work, the construction Work is at the risk of the Contractor and no partial payment shall constitute acceptance of the Work or relieve the Contractor of responsibility of completing the Work under the Contract.
- B. Whenever the estimated cost of the Work is less than \$25,000,000, the Port will purchase and maintain, in a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a builder's risk "all-risk" including Earthquake and Flood with applicable sub-limits, or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. This insurance shall include interests of the Port, the Contractor, and Subcontractors of any tier on the Project. There may be some differences between this Section and the builder's risk insurance secured by the Port; therefore, the Contractor shall provide an "installation floater" or similar property coverage for materials not yet installed, whether stored on site or off site or in transit, and the Contractor shall obtain property coverage for all Contractor-owned equipment and tools-each loss may be subject to a deductible. Losses up to the deductible amount shall be the responsibility of the Contractor. All tools and equipment not intended as part of the construction or installation will be the sole responsibility of the Contractor.

PART 2 - PRODUCTS - NOT USED

PART 3 - PRODUCTS - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 PREVAILING AND OTHER REQUIRED WAGES

- A. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project.
- B. Pursuant to RCW 39.12, "Prevailing Wages on Public Works," no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the "prevailing rate of wage" in effect as of the date that bids are due.
 - 1. Based on the bid submittal deadline for this project, the applicable effective date for prevailing wages for this project is August 31, 2017.
- C. The State of Washington prevailing wage rates applicable for this public works project, which is located in Pierce County, may be found at the following website address of the Department of Labor and Industries:

<https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>
- D. The schedule of the prevailing wage rates is made a part of the Contract Documents by reference as though fully set forth herein; and a copy of the applicable prevailing wage rates are also available for viewing at the Port Administration Building, located at One Sitcum Plaza, Tacoma, WA 98421 (253-383-5841). Upon request to the Procurement Department at procurement@portoftacoma.com, the Port will email or mail a hard copy of the applicable Journey Level prevailing wages for this project.
- E. Questions relating to prevailing wage data should be addressed to the Industrial Statistician.

Mailing Address: Washington State Department of Labor and Industries
Prevailing Wage Office
P.O. Box 44540
Olympia, WA 98504

Telephone: (360) 902-5335

Facsimile: (360) 902-5300

- 1. If there is any discrepancy between the attached or provided schedule of prevailing wage rates and the published rates applicable under WAC 296-127-011, or if no schedule is attached, the applicable published rates shall apply with no increase in the Contract Sum. It is the Contractor's responsibility to ensure that the correct prevailing wage rates are paid.
- F. Statement to Pay Prevailing Wages
 - 1. Prior to any payment being made by the Port under this Contract, the Contractor, and each Subcontractor of any tier, shall file a Statement of Intent to Pay Prevailing Wages under oath with the Port and certified by the Director of Labor and Industries.
 - 2. The statement shall include the hourly wage rate to be paid to each classification of workers entitled to prevailing wages, which shall not be less than the prevailing rate of wage, and the estimated number of workers in each classification employed on the Project by the Contractor or a Subcontractor of any tier, as well as the Contractor's contractor registration number and other information required by the Director of Labor and Industries.

3. The statement, and any supplemental statements, shall be filed in accordance with the requirements of the Department of Labor and Industries. No progress payment shall be made until the Port receives such certified statement.
- G. The Contractor shall post in a location readily visible to workers at the Project site (1) a copy of the Statement of Intent to Pay Prevailing Wages approved by the Industrial Statistician of the Department of Labor and Industries and (2) the address and telephone number of the Industrial Statistician of the Department of Labor and Industries to whom a complaint or inquiry concerning prevailing wages may be directed.
- H. If a State of Washington prevailing wage rate conflicts with another applicable wage rate (such as Davis-Bacon Act wage rate) for the same labor classification, the higher of the two shall govern.
- I. Pursuant to RCW 39.12.060, if any dispute arises concerning the appropriate prevailing wage rate for work of a similar nature, and the dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries, and his or her decision shall be final and conclusive and binding on all parties involved in the dispute.
- J. Immediately following the end of all work completed under this Contract, the Contractor, and each Subcontractor of any tier, shall file an approved Affidavit of Wages Paid with the L&I.
- K. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs and expenses, whether direct, indirect, including but not limited to attorneys' fees and consultants' fees and other costs and expenses, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or Chapter 51 RCW ("Industrial Insurance"), including but not limited to RCW 51.12.050.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 REQUIREMENTS APPLICABLE PORT-WIDE

- A. The Contractor shall submit prior to the start of work a list of emergency contact numbers for itself and subcontractors, suppliers and manufacturer representatives. Each person on the project site shall have a valid identification card that is tamper proof with laminated photo identification such as one of the following:
 - 1. State-issued Driver's license (also required if driving a vehicle)
 - 2. Card issued by a governmental agency
 - 3. Passport
 - 4. Identification card issued by the Port of Tacoma
 - 5. Pacific Maritime Association card, or
 - 6. Labor organization identification card
- B. Identification cards shall be visible while on the work site or easily displayed when requested.

1.02 TRANSPORTATION WORKER IDENTIFICATION CARD (TWIC) SUMMARY

- A. TWIC is required for all personnel needing unescorted access to secure and restricted areas of Port facilities subject to 33 CFR 105, including truckers, surveyors, construction personnel, and delivery personnel. Secure areas are those areas with security measures for access control in accordance with a Coast Guard approved security plan; restricted areas are those areas within a secure area that require increased limited access and a higher degree of security protection. New terminals under construction prior to terminal operations may not be designated secure areas. Construction on existing maritime transportation facilities and punchlist or other type of work requirements on facilities that have been certified under 33 CFR will require a TWIC.
- B. Contractors should allow for application and enrollment for the security threat assessment and issuance of TWIC when submitting a bid.

1.03 ESCORTING

- A. To access restricted Port facilities, all un-credentialed individuals must be accompanied by a person who has been issued a TWIC and trained as an escort.
- B. For more information, refer to the Port Security website at: <http://www.portoftacoma.com>
- C. For project specific information, refer to 01 14 00 - Work Restrictions.

1.04 ELIGIBILITY FOR TWIC

- A. Refer to the Transportation Worker Identification Credential website at: <https://twicprogram.tsa.dhs.gov/TWICWebApp> for information on eligibility and applying for TWIC.

1.05 1.06 TWIC USE AND DISPLAY

- A. Each worker granted unescorted access to secure areas of a facility or vessel must present their cards to authorized personnel, who will compare the holder to his or her photo, inspect security features on the TWIC and evaluate the card for signs of tampering. The Coast Guard will verify TWIC's when conducting vessel and facility inspections and during spot checks using hand-held scanners, ensuring credentials are valid.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The accompanying Drawings and Specifications show and describe the location and type of Work to be performed under this project. Work is more specifically defined on the drawings listed in Section 00 01 15.
 - 1. The Work under this contract is to provide, furnish and install all labor, materials and equipment required to complete the work, installed, tested, and ready for use, and as described in these documents.
 - 2. The Maintenance Mezzanine and Shed Heating consists of: Procuring and installing a free standing, open grated, steel mezzanine and associated fire protection, lighting and heating modifications. The project also includes installing two heat pumps inside an existing pre-engineered metal building and associated electrical and insulation upgrades.

1.02 LOCATION

- A. The work is located at:

902 Port of Tacoma Rd

Tacoma, WA 98421

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies work sequence and constraints.
- B. The purpose of the milestones, sequence and limitations of construction are to ensure that the Contractor understands the requirements and limitations on its work by the specific characteristics of the Contract, schedules and conducts work in a manner consistent with achieving these purposes, and complies with the construction schedule, the specific sequence, constraints, milestones and limitations of work specified.
- C. Sequence of construction: Plan the sequence of construction to accommodate all the requirements of the specifications. The Contract Price shall include all specified requirements as described in this Section.

1.02 CONTRACTOR ACCESS AND USE OF PREMISES

- A. Activity Regulations
 - 1. Ensure Contractor personnel deployed to the project become familiar with and follow all regulations or restrictions established by the Engineer.
- B. Occupied Building
 - 1. The Contractor will be working in existing buildings which are occupied during normal business hours, as stipulated above.
 - 2. Protect materials and equipment in areas adjoining the immediate work area.
- C. Working Facility
 - 1. The Facility will remain in operation for the duration of construction. The Contractor shall conduct all items of the Work in such a manner as to prevent interference with the normal operations of the Facility.
 - 2. TWIC Escorting Requirements:
 - a. TWIC is mandatory. Refer to Section 00 73 63 Security Requirements for information on requirements for Contractor. Subcontractors, suppliers, manufacturing representatives and other personnel to access the construction site.
 - b. Access is through the Port of Tacoma Main Gate at Port of Tacoma Road and E. 11th St.
 - c. Expect heavy truck traffic near the Main Gate. Movement may be delayed when trains access the North Intermodal Yard.
- D. Work Site Regulations
 - 1. Keep within the limits of work and assigned avenues of ingress and egress. Do not enter any areas outside the designated work location unless previously approved by the Engineer. The Contractor must comply with the following conditions:
 - a. Restore all common areas to a clean and useable condition that permits the resumption of Tenant operations after the Contractor ceases daily work.
 - b. Be responsible for control and security of Contractor-owned equipment and materials at the work site. Report to Port Security (phone (253) 383-9472) any missing/lost/stolen property.

- c. Ensure all materials, tools and equipment will be removed from the site or secured within the designated laydown area at the end of each shift.

1.03 CONSTRAINTS - GENERAL

A. Constraints for Work at Site

1. Electrical Work Constraints:

- a. Coordinate shutdown of 208/120V panelboard "LM" in mezzanine area 48 hours in advance with the Port Project Manager.
- b. Power shutdown of 208/120V power service limited to 2 hours.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION

PART 1 - GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

- A. The provisions and intent of the Contract, including the General and Supplemental Conditions apply to this work as if specified in this section. Work related to this section is described throughout these Specifications.
- B. Individual submittals are required in accordance with the pertinent sections of these Specifications

1.02 PAYMENT PROCEDURES

- A. Monthly pay estimates shall clearly identify the work performed for the given time period based on the approved Schedule of Values.
 - 1. At the Pre-construction meeting, the Engineer and the Contractor shall agree upon a date each month when payment applications shall be submitted.
- B. Prior to submitting a payment application, the Contractor and Engineer shall meet each month to review the work accomplished to determine the actual quantities including labor, materials and equipment charges to be billed.
 - 1. Prior to the payment application meeting, the Contractor shall submit to the Engineer all measurement documentation as referenced in these contract documents; to include all measurement by weight, volume or field.
 - 2. For all change work being done on a force account basis, the Contractor shall submit prior to meeting with Engineer all Force Account back-up documentation as required to process the payment application where Force Account work is being billed. The Engineer and the Contractor shall review the documentation at the payment application meeting to verify quantities and review the work accomplished.
 - 3. The Contractor shall bring a copy of all documentation to the pay application meeting with the Engineer.
- C. Following the Engineers' review, the Contractor shall prepare an original pay estimate with complete supporting documentation attached and submit it electronically using Adobe PDF file format to cpinvoices@portoftacoma.com
- D. An estimated cashflow statement projecting the Contractor's monthly billings on the project shall be submitted with each payment application.

1.03 PAYMENT PRICING

- A. Pricing for the various lump sum or unit prices in the Bid Form, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work in accordance with the requirements of the Contract Documents.
- B. Pricing also includes all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- C. No separate payment will be made for any item that is not specifically set forth in the Bid Form, and all costs therefore shall be included in the prices named in the Bid Form for the various appurtenant items of work.

- D. All other work not specifically mentioned in the measurement and payment sections identified below shall be considered incidental to the work performed and merged into the various unit and lump sum prices bid. Payment for work under one item will not be paid for under any other item.
- E. The Port of Tacoma reserves the right to make changes should unforeseen conditions necessitate such changes. Where work is on a unit price basis, the actual quantities occasioned by such changes shall govern the compensation.

1.04 LUMP-SUM MEASUREMENT

- A. Lump-sum measurement will be for the entire item, unit of Work, structure, or combination thereof, as specified and as indicated in the Contractor's submitted bid.
 - 1. If the Contractor requests progress payments for lump-sum items, such progress payments will be made in accordance with an approved schedule of values. The quantity for payment for completed work shall be an estimated percentage of the lump sum amount, agreed to between the Engineer and Contractor, payable in monthly progress payments in increments proportional to the work performed in amounts as agreed between the Engineer and the Contractor.

1.05 REJECTED, EXCESS, OR WASTED MATERIALS

- A. Quantities of material wasted or disposed of in a manner not called for under the Contract; rejected loads of material, including material rejected after it has been placed by reasons of the failure of the Contractor to conform to the provisions of the Contract; material not unloaded from the transporting vehicle; material placed outside the lines indicated on the Contract Drawings or established by the Engineer; or material remaining on hand after completion of the Work, will not be paid for, and such quantities shall not be included in the final total quantities. No additional compensation will be permitted for loading, hauling, and disposing of rejected material.

1.06 MEASUREMENT AND PAYMENT

- A. Item #1: MOBILIZATION AND DEMOBILIZATION
 - 1. Payment for MOBILIZATION AND DEMOBILIZATION shall be for preparatory work and operations performed by the Contractor including, but not limited to completion and submittal and approval of the following:
 - a. All bonds and insurance certificates
 - b. Construction Site Safety and Security Plan (CSSP)
 - c. Initial Submittal Schedule
 - d. Schedule of Values
 - e. Detailed CPM progress schedule
 - f. Pre-construction photographs and videotapes
 - g. Submittal of Inspection and Test Plan
 - h. Erosion and Sediment Control Plan
 - i. Hazardous and Contaminated Substance Health and Safety Plan
 - j. Establishing Contractor's Project Manager, Superintendent, and other required specified personnel on the Work site full time.

- k. Furnishing and installing all temporary facilities and controls as needed for the safe and proper completion of the work, including utilities, sanitary facilities, barriers and enclosures, fences, staging and entrance areas, and field offices, as specified.
 - l. Mobilization onto the site required in support of the Contractor's first 30 days of operations.
 - m. Furnishing and installing project signs, as specified.
 - 2. MOBILIZATION AND DEMOBILIZATION shall be paid at the lump sum price listed in the Contractor's submitted bid. Incremental payment shall be made for each location as follows:
 - a. 40% after completion of 5% of the total contract amount of other bid items have been earned.
 - b. 40% after completion of 20% of the total contract amount of other bid items have been earned.
 - c. 20% after completion of all work on the project has been completed, including cleanup and acceptance of the project by the Port.
- B. Item #2: PROJECT ADMINISTRATION
- 1. Item Description: The Work of PROJECT ADMINISTRATION includes full compensation for all administrative costs associated with administering and supervising the project including supervision of personnel, coordination of all work activities, coordination of subcontractors and/or suppliers, preparation and transmittal of submittals, permit acquisitions, and project overhead including health and safety.
 - 2. Measurement: PROJECT ADMINISTRATION will be measured by lump sum.
 - 3. Payment: PROJECT ADMINISTRATION will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved Schedule of Values.
- C. Item #3:FURNISH MEZZANINE.
- 1. Item Description: The Work of FURNISH MEZZANINE shall be full compensation for the cost of labor, materials, tools, equipment, handling, transportation and incidentals required to deliver to the site the mezzanine as shown on the drawings and as defined in these specifications.
 - 2. Measurement: FURNISH MEZZANINE will be measured by lump sum.
 - 3. Payment: FURNISH MEZZANINE will be paid at the lump sum price as listed on the bid form. The payment will be made when the mezzanine is delivered to the site.
- D. Item #4:INSTALL MEZZANINE.
- 1. Item Description: The Work of INSTALL MEZZANINE shall be full compensation for the cost of labor, materials, tools, equipment, handling, transportation and incidentals required to erect mezzanine and bolt it to the existing floor as shown on the drawings and as defined in these specifications.
 - 2. Measurement: INSTALL MEZZANINE will be measured by lump sum.
 - 3. Payment: INSTALL MEZZANINE will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved Schedule of Values.

E. Item #5:ARCHITECTURAL MODIFICATION - MAIN BLDG.

1. Item Description: The Work of ARCHITECTURAL MODIFICATION - MAIN BLDG includes all work necessary to complete the work on the contract architectural plans including but not limited to furnishing and installing door additions, demolishing walls, patching, painting, new exit signage and removing a ladder in the parts area as shown on the drawings and defined in these specifications
2. Measurement: ARCHITECTURAL MODIFICATION - MAIN BLDG will be measured by lump sum.
3. Payment: ARCHITECTURAL MODIFICATION - MAIN BLDG will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved schedule of values.

F. Item #6:ELECTRICAL WORK - MAIN BLDG.

1. Item Description: The Work of ELECTRICAL WORK - MAIN BLDG shall be full compensation for the cost of labor, materials, tools, equipment, and incidentals required to complete the work as shown on the contract electrical drawings and as defined in these specifications. Includes but not limited to, all wiring, terminations, breakers, electrical shutdowns, conduits, penetrations and necessary structural supports.
2. Measurement: ELECTRICAL WORK - MAIN BLDG will be measured by lump sum.
3. Payment: ELECTRICAL WORK - MAIN BLDG will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved schedule of values.

G. Item #7:MECHANICAL WORK - MAIN BLDG.

1. Item Description: The Work of MECHANICAL WORK - MAIN BLDG shall be full compensation for the cost of labor, materials, tools, equipment, and incidentals required to complete the work shown on the mechanical plans and as defined in these specifications. Includes but not limited to, furnishing and installing gas heaters, and structural supports as well as demolition and modifications to existing heating, condensate and refrigerant systems.
2. Measurement: MECHANICAL WORK - MAIN BLDG will be measured by lump sum.
3. Payment: MECHANICAL WORK - MAIN BLDG will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved schedule of values.

H. Item #8:FIRE PROTECTION WORK.

1. Item Description: The Work of FIRE PROTECTION WORK shall be full compensation for the cost of labor, materials, tools, equipment, and incidentals required to complete the work shown on the fire protection plans and as defined in these specifications. Includes but not limited to, furnishing and installing h sprinkler system, tie in to existing fire protection system, all necessary structural supports.
2. Measurement: FIRE PROTECTION WORK will be measured by lump sum.
3. Payment: FIRE PROTECTION WORK will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved schedule of values.

I. Item #9:ARCHITECTURAL MODIFICATION - SHED.

1. Item Description: The Work of ARCHITECTURAL MODIFICATION - SHED includes all work necessary to complete the work on the contract architectural plans including but not limited to furnishing and installing insulation, removal of roll up doors, furnish and installing two roll up doors and repairs to gaps in shed as shown on the drawings.
2. Measurement: ARCHITECTURAL MODIFICATION - SHED will be measured by lump sum.
3. Payment: ARCHITECTURAL MODIFICATION - SHED will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved schedule of values.

J. Item Item #10:ELECTRICAL WORK - SHED.

1. Item Description: The Work of ELECTRICAL WORK - SHED shall be full compensation for the cost of labor, materials, tools, equipment, and incidentals required to complete the work as shown on the contract electrical drawings and as defined in these specifications. Includes but not limited to, all wiring, terminations, panels, breakers, electrical shutdowns, conduits, penetrations and necessary structural supports.
2. Measurement: ELECTRICAL WORK - SHED will be measured by lump sum.
3. Payment: ELECTRICAL WORK - SHED will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved schedule of values.

K. Item #11:MECHANICAL WORK - SHED.

1. Item Description: The Work of MECHANICAL WORK - SHED shall be full compensation for the cost of labor, materials, tools, equipment, and incidentals required to complete the work shown on the mechanical plans and as defined in these specifications. Includes but not limited to, furnishing and installing electric heaters, and providing necessary foundations and structural supports.
2. Measurement: MECHANICAL WORK - SHED will be measured by lump sum.
3. Payment: MECHANICAL WORK - SHED will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved schedule of values.

L. Item #12:PROJECT CLOSEOUT.

1. Item Description: The Work of PROJECT CLOSEOUT includes all work necessary to finish the project including warranty work, operations and maintenance manuals, project as-built drawings, providing certificates, punchlist items and cleanup.
2. Measurement: PROJECT CLOSEOUT will be measured by lump sum.
3. Payment: PROJECT CLOSEOUT will be paid at the lump sum price as listed on the bid form. Incremental payment for completed work shall be a percentage, determined by the Engineer, in accordance with the approved schedule of values.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXEUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions and Division 0 and 1 Specifications sections shall apply to all sections of the Contract Documents including specifications, drawings, addenda or other changes of documents issued for bidding/construction.

General provisions of the Contract, including General Conditions, Supplementary Conditions and Division 0 and 1 Specifications sections shall apply to all sections of the Contract Documents including specifications, drawings, addenda or other changes of documents issued for bidding/construction.

1.02 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.

1.03 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. The contract documents include performance specifications for products and equipment which meet project requirements. In those cases where a representative item or manufacturer is named in the specification it is provided for the sole purpose of identifying a product meeting the required functional performance. Where the words "or equal" are used a substitution request as further described is not required.
- C. Where non-competitive or sole source products or manufacturers are explicitly specified with the words "or approved equal", or "Engineer approved equal", or "as approved by the Engineer" are used, they shall be taken to mean "or approved equal". In these cases a substitution request as further described in this section, is required.

1.04 SUBMITTALS

- A. Post-Award Substitution Requests: Submit a substitution request as defined in 01 33 00 – Submittal Procedures. All substitution requests must be submitted by the Contractor and not a subcontractor or supplier.
 - 1. Substitution Request Form: Use a copy of form located in Section 00 63 25.
 - 2. Documentation: Show compliance with requirements for substitutions with the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include, but are not limited to, attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names, and addresses. Also provide names and addresses of the AE and Owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for project
 - j. Comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within 7 calendar days of receipt of a request for substitution. Engineer will notify Contractor through Port of acceptance or rejection of proposed substitution within 15 calendar days of receipt of request, or 7 calendar days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order or Minor Change in Work.
 - b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.
- B. Substitutions will not be considered when:
- 1. Indicated or implied on shop drawings or product data submittals without formal request submitted in accordance with this Section.
 - 2. Submittal for substitution request has not been reviewed and approved by Contractor.
 - 3. Acceptance will require substantial revision of Contract Documents or other items of the Work.
 - 4. Submittal for substitution request does not include point-by-point comparison of proposed substitution with specified product.

1.05 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

PART 2 - PRODUCTS

2.01 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 7 days prior to date required for preparation and review of related submittals.
1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution will not adversely affect Contractor's construction schedule.
 - c. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - d. Requested substitution is compatible with other portions of the Work
 - e. Requested substitution has been coordinated with other portions of the Work
 - f. Requested substitution provides specified warranty.
 - g. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Engineer will consider Contractor's requests for substitution if received within 7 days after the Notice of Award.
1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied:
 - a. Requested substitution offers Port a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Port must assume. Port's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Port, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - f. Requested substitution is compatible with other portions of the Work.
 - g. Requested substitution has been coordinated with other portions of the Work.
 - h. Requested substitution provides specified warranty.
 - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.03 SUBMITTALS

- A. The Contractor shall submit the following documentation to the Port:
 - 1. List of Labor Rates
 - a. For the Contractor and each subcontractor, a list of labor rates for each trade applicable to the scope of work to be performed. These submitted rates shall be broken down to include the base wage, fringes, FICA, SUTA, FUTA, industrial insurance and medical aid premiums as stated in the General Conditions. The rates shall not contain any travel time, safety, loss efficiency factors, overhead or profit. Rates shall be submitted for straight time, overtime and double time in a form acceptable to the Engineer. Contractor shall provide proof of all labor rate costs as required by the Engineer including the submission of a copy of the most current Workers Compensation Rate Notice from Labor & Industries and a copy of the Unemployment Insurance Tax Rate notice from the Employment security department.
 - 1) If labor rates change during the course of the project or additional labor rates become required to complete the work, the Contractor shall submit new rates for approval.
 - 2. List of Equipment.
 - a. Submit for the Contractor and each subcontractor, a list of equipment and rates applicable to the scope of work to be performed. The equipment rates shall conform to the rates shown on Equipment Watch. A separate page from equipment watch detailing the hourly rate shall be submitted as backup documentation for each piece of equipment.
 - 1) If the list of equipment and/or equipment rates changes during the course of the project or additional equipment becomes required to complete the work, the Contractor shall submit a new list and rates for approval.
 - 3. No applications for payment or change orders will be processed for the Contractor until labor and equipment rates have been submitted and approved.

1.04 METHOD TO CALCULATE ADJUSTMENTS TO CONTRACT PRICE

- A. One of the following methods shall be used:
 - 1. Unit Price Method;
 - 2. Firm Fixed Price Method (Lump Sum); or,
 - 3. Time and Materials Method (Force Account).
- B. The Port preferred methods are firm fixed price or unit prices.

1.05 MINOR CHANGES IN THE WORK

- A. Engineer will issue a written directive authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.06 PROPOSAL REQUESTS

- A. Port-Initiated Proposal Requests: The Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Engineer are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Contractor shall submit a written proposal within the time specified in the General Conditions. The proposal shall represent the Contractor's offer to perform the requested work, and the pricing set forth within the proposal shall represent full, complete, and final compensation for the proposed change and any impacts to any other Contract Work, including any adjustments in the Contract Time.
 - a. Include a breakdown of the changed work in sufficient detail that permits the Engineer to substantiate the costs.
 - 1) Generally, the cost breakdown should be divided into the time and materials categories listed in the General Conditions under Article 8.02B for either Lump Sum Proposals or Force Account Proposals.
 - 2) For Unit Price Proposals, include the quantity and description of all work involved in the unit pricing being proposed, along with a not to exceed total cost.
 - b. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or differing site conditions require modifications to the Contract, the Contractor may initiate a claim by submitting a request for a change to the Engineer.
 - 1. Notify the Engineer immediately upon finding differing conditions prior to disturbing the site.
 - 2. Provide follow-up written notification and differing site conditions proposal within the time frames set forth in the General Conditions.
 - 3. Provide the differing site condition change proposal in the same or similar manner as described above under 1.04.A.
 - 4. Comply with requirements in Section 01 25 00 Substitution Procedures During Construction if the proposed change requires substitution of one product or system for product or system specified.
 - 5. Proposal Request Form: Use form acceptable to Engineer.

1.07 PROCEEDING WITH CHANGED WORK

- A. The Engineer may issue a directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order per the General Conditions, Article 8.01.E.

1. The directive will contain a description of change in the Work and a not-to exceed amount. It will designate the method to be followed to determine the change in the Contract Sum or the Contract Time.

1.08 CHANGE ORDER PROCEDURES

A. Issuance of Change Order

1. On approval of the Contractor's proposal, and following successful negotiations, the Engineer will issue a Change Order for signature by the Contractor and execution by the Engineer.
 - a. The Contractor shall sign and return the Change Order to the Engineer within **four (4) days** following receipt of the Change Order from the Engineer. If the Contractor fails to return the signed Change Order within the allotted time, the Engineer may issue a Unilateral Change Directive.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes specifications for preparation, format, and submittal of Schedule of Values.
- B. The Schedule of Values will establish unit prices for individual items of work.
- C. The Schedule of Values will be the basis for payment of contract work.

1.02 PREPARATION

- A. To facilitate monthly pay requests, develop the Schedule of Values based on the Contractor's submitted Bid. The schedule of Values shall be used to provide an allocation of the Work for measurement and payment to a level of detail to ensure accurate payment for the Work accomplished.
- B. Obtain the agreement of the Engineer on the Schedule of Values. No payment will be made prior to an agreed upon Schedule of Values.
- C. Include an updated version of the Schedule of Values as changes occur. Update the Schedule of Values to include:
 - 1. Dollars earned and percent complete for the current progress payment period.
 - 2. Dollars earned and percent complete to-date, excluding the current progress payment period.
 - 3. Total dollars earned and percent complete to-date.
 - 4. Total dollars remaining
 - 5. Changes resulting from Change Orders
- D. The total value of the line items in the Schedule of Values plus any approved Change Orders shall be equal to the current approved contract price.
- E. The value of stored material shall be identified in the Schedule of Values with both a material-purchase activity and a separate corresponding installation activity in the Construction Schedule(s).
- F. Include as exhibits, drawings or sketches as necessary, to better define the limits of pay items that are in close proximity and that have no clear boundary in the Contract Drawings.

1.03 SUBMITTAL

- A. Submit preliminary Schedule of Values within 10 days of the effective date of the Notice to Proceed.
- B. Submit corrected Schedule of Values within 10 days upon receipt of reviewed Schedule of Values.
- C. At the Engineer's request, submit documentation substantiating the cost allocations for line items within the Schedule of Values.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 SCHEDULE OF VALUES

- A. Submit the Schedule of Values in a form acceptable to the Engineer.

- B. Provide updated Schedule of Values as required by the Engineer and as indicated in the Contract Documents.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE

- A. The purpose of this section is to provide the framework for communication between the Port and the Contractor by defining the types and timing of administrative tasks including meetings and other items related to communications.

1.02 NOTICE TO PROCEED

- A. Contract execution will be made per the requirements of the Contract Documents. Once the contract has been executed and all pre-work submittals have been received, the Engineer will issue a Notice to Proceed (NTP).
 - 1. In certain instances, the Engineer may issue to the Contractor a Limited NTP for specified elements of the work described in these Contract Documents.
- B. The Contractor shall submit all pre-work submittals within 10 days of contract execution.
 - 1. A list of all pre-work submittals required for NTP is listed in paragraph 1.03 below.
 - 2. No contract time extension shall be granted for any delays in issuance of the NTP by the Engineer due to the Contractor's failure to provide acceptable submittals required by the Contract Documents.

1.03 SUBMITTALS NEEDED FOR NTP

- A. List of Contractor and Subcontractor Personnel
- B. Submit list as required in section 00 73 63 – Security Requirements
- C. List of Emergency Contacts
- D. Project Schedule per Section 01 32 16 Construction Project Schedule
- E. Submittal Log per Section 01 33 00 Submittal Procedures
- F. Health & Safety Plan per Section 01 35 29 Health, Safety, and Emergency Response Procedures

1.04 COORDINATION

- A. The Contractor shall coordinate all its activities through the Engineer.
- B. The Contractor shall coordinate construction operations as required to execute the Work efficiently, to obtain the best results where installation of one part of the Work depends on other portions.

1.05 PROJECT MEETINGS

- A. Pre-Construction Meeting
 - 1. After execution of the contract but prior to commencement of any work at the site, a mandatory one time meeting will be scheduled by the Engineer to discuss and develop a mutual understanding relative to the administration of the safety program, preparation of the schedule of values, change orders, RFI's, submittals, scheduling prosecution of the work. Major subcontractors who will engage in the work shall attend.
 - 2. Suggested Agenda: The agenda will include items of significance to the project. A sample agenda is attached to this section.

3. Location of the Pre-Construction Meeting will be held at the Port of Tacoma Administration Building located at One Sitcum Plaza.
- B. Weekly Progress Meetings – Progress meetings include the Contractor, Engineer, consultants and others affected by decisions made.
 1. The Engineer will arrange meetings, prepare standard agenda with copies for participants, preside at meetings, record minutes and distribute copies within ten working days to the Contractor, meeting participants, and others affected by decisions made.
 - a. The Engineer will approve submitted meeting minutes in writing within 10 working days.
 2. Attendance is required for the Contractor's job superintendent, major subcontractors and suppliers, Engineer, and representatives of the Port as appropriate to the agenda topics for each meeting.
 3. Standard Agenda
 - a. Review minutes of previous meeting.
 - b. Review of work progress.
 - c. Field observations, problems, and decisions.
 - d. Identification of problems that impede planned progress.
 - e. Maintenance of Progress Schedule (3 weeks ahead; 1 week back).
 - f. Corrective measures to regain projected schedules.
 - g. Planned progress during succeeding work period.
 - h. Coordination of projected progress.
 - i. Maintenance of quality and work standards.
 - j. Effect of proposed changes on progress schedule and coordination.
 - k. Demonstration that the project record drawings are up-to-date.
 - l. Other business relating to the work.
- C. Cost Meeting
 1. A separate cost meeting may be set up by the Engineer to discuss RFI's (or any other issues) that may cause scope, schedule or monetary changes to the contracts in more detail than necessary at the progress meeting. The Engineer will arrange, host and provide an agenda for cost meetings. Attendees would include the Engineer, Contractor's job superintendent and others as invited.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Port and Contractor shall use the Port Contract Management application (eBuilder®) for electronic information exchange throughout the duration of the Contract as later described.
 - 1. eBuilder is a web-based application accessed via the web.
 - 2. The Contractor will receive up to two separate user accounts for access to eBuilder®.
 - 3. The joint use of this system is to facilitate and coordinate the electronic exchange of Requests for Information, Submittals, Change Order Proposals, Pay Estimates and project specific correspondence.

1.02 USER ACCESS LIMITATIONS

- A. Contractor's access to eBuilder® is granted and controlled by the Engineer.
 - 1. The users assigned by the Contractor to use eBuilder shall be competent and experienced with the practices commonly employed in the industry for electronically submitting requests for information, submittals, product data, shop drawings and related items as required by the contract and the methods commonly used for project correspondence transmission and filing.
 - 2. Any users assigned by the Contractor whom the Engineer determines is incapable of performing the prescribed tasks in an accurate, competent and efficient manner will be removed upon request from the Engineer. The qualifications and identity of a replacement user shall be submitted within 24 hours for consideration by the Engineer. Once accepted by the Engineer, the user account will be modified accordingly.

1.03 CONTRACTOR TECHNOLOGY REQUIREMENTS

- A. The Contractor is responsible for providing and maintaining web enabled devices capable of running the desktop version of the e-Builder website effectively.

1.04 CONTRACTOR SOFTWARE REQUIREMENTS

- A. The Contractor is responsible for providing and maintaining the following:
 - 1. An office suite that is Microsoft Office 2013 compatible for generation and manipulation of correspondence.
 - 2. A program capable of editing, annotating and manipulating Adobe pdf files for inserting the Contractor's review stamp, clouding and adding notation to the files as necessary for review by the Engineer.

1.05 CONTRACTOR RESPONSIBILITY

- A. Provide all the equipment, internet connections, software, personnel and expertise required to support the use of eBuilder as described in the Contract documents.

1.06 PORT RESPONSIBILITY

- A. Provide the Contractor with the following:
 - 1. All forms necessary for application to obtain permissions to access eBuilder® as described above.
 - 2. Information, basic user guides and requirements on methods for using eBuilder®.
 - 3. Instruction for the Contractor's staff utilizing eBuilder.

4. The Contractor will have up to two (2) user accounts to access eBuilder.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 UTILIZATION OF EBUILDER®

- A. The Contractor shall provide required information in a timely manner that also supports the project schedule and meets the requirements of the Contract.
- B. The Contractor shall provide and maintain competent and qualified personnel to perform the various tasks required to support the work within eBuilder®.
- C. The Port will not be liable for any delays associated from the usage of eBuilder® including, but not limited to: slow response time, Port maintenance and off-line periods, connectivity problems or loss of information. Under no circumstances shall the usage of eBuilder® software be grounds for a time extension or cost adjustment to the contract.

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.02 SUBMITTALS

- A. Within 10 days following execution of the contract, submit preliminary schedule defining planned operations.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.

1.03 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with one years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.04 SCHEDULE FORMAT

- A. The baseline project schedule shall be produced using the Critical Path Method (CPM) format.
- B. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- C. Sheet Size: Multiples of 11 x 17 (280 x 432 mm).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 BASELINE SCHEDULE

- A. Prepare preliminary schedule in the form of a horizontal bar chart.
- B. The baseline project schedule shall include all the activities listed in the Schedule of Values and be directly related to items listed in the Bid Form. The Contractor is encouraged to add sufficient activities to facilitate a clear understanding of the means and methods planned for the various work items.
- C. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction and critical path. At a minimum it shall include and show the following:
 - 1. A time scale showing the elementary work items needed to complete the work.
 - 2. Estimated time durations for each activity, defined as any single identifiable work step within the project.
 - 3. A graphical network diagram showing the logical sequence of activities, their precedence relationships, and estimated float or leeway available for each.
 - 4. The different categories of work as distinguished by crew requirements, equipment requirements, and construction materials.

- 5. The different areas of responsibility, such as distinctly separate or subcontracted work, and identifiable subdivisions of work.
- D. It shall be maintained and updated as necessary to accurately reflect past progress and the most probable future progress
- E. Activities shown shall include submittals, milestones, sufficient task breakdown for major components of work.
- F. Identify work of separate stages and other logically grouped activities.
- G. Provide sub-schedules to define critical portions of the entire schedule.
- H. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, products identified, and dates reviewed submittals will be required from the Engineer. Indicate decision dates for selection of finishes.

3.02 PROGRESS SCHEDULE

- A. From the regularly-maintained baseline project schedule, progress schedules showing a three-week look-ahead, one-week look-back, shall be submitted and distributed at the weekly progress meetings. The progress schedule shall represent a practical plan to complete the work shown within the contract work window presented. At a minimum, the presentation, typically a Gantt-style chart, shall convey the task durations, a logical work sequence, task interdependencies, and identify important or critical constraints.
- B. Submittal and distribution of progress schedules will be understood to be the Contractor's representation that the scheduled work meets the requirements of the contract documents and that the work will be executed in the manner and sequence presented, and over the durations indicated.
- C. The scheduling, coordination, and execution of construction in accordance with the contract documents are the responsibility of the Contractor. The Contractor shall involve, coordinate, and resolve scheduling with all subcontractors, material suppliers, or others affected in development of the progress schedules.
- D. The progress schedule shall be used for coordination purposes for inspection and testing purposes as well as validation of work progress against the baseline schedule.

3.03 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- D. Indicate changes required to maintain Date of Substantial Completion.
- E. Submit reports required to support recommended changes.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions apply to this work as if specified in this section. Work related to this section is described throughout these Specifications
- B. Individual submittals required in accordance with the pertinent sections of these specifications. Other submittals may be required during the course of the project and are considered part of the normal work to be completed under the Contract.

1.02 SUBMITTAL LOG

- A. Contractor shall, within 14 days prepare and submit for Engineer approval a detailed log of all the submittals required under this Contract, along with any other submittals identified by the Port or Contractor. The log shall include, but not be limited to, schedules, required construction work plans, equipment and material cut sheets, shop drawings, project record documents, test results, survey records, record drawings, results of QC testing, and all other items for which a submittal is required. The submittal log shall be organized by CSI Specification Division, and Section number and include the following information:
 - 1. Submittal Number
 - 2. Item identification.
 - 3. Scheduled submittal date, date returned, date approved.
 - 4. Date submittal or material is needed.
 - 5. After the submittal log is reviewed and approved by the Engineer, it shall become the basis for the submittal of all items by Contractor.

1.03 COMPLIANCE

- A. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Engineer based on these specifications.

1.04 SHOP DRAWINGS AND MANUFACTURERS' LITERATURE

- A. The Port will not accept shop drawings that prohibit the Port from making copies for its own use.
- B. Shop drawings shall be prepared accurately and to a scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the work.
- C. All drawings submitted to the Engineer for approval shall be drawn to scale as ANSI D
- D. Required electronic formats for these drawings are as follows:
 - 1. AutoCad DWG
 - 2. PDF - Formatted to print to half-scale using 11x17 paper.
- E. Catalog cuts or brochures shall show the type, size, ratings, style, color, manufacturer, and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. General catalogs or partial lists will not be accepted. Manufacturers' original electronic files are required for submitting.

1.05 SUBMITTAL REVIEW

- A. After review of each of Contractor's submittals, the submittal will be returned to Contractor with a form indicating one or more of the following:
 - 1. No Exceptions Taken - Means, accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. But it does not constitute approval or deletion of specified or required items not shown in the partial submittal.
 - 2. Make Corrections Noted - Same as Item 1, except that minor corrections as noted shall be made by Contractor.
 - 3. Reviewed - Submittal has been reviewed by the port. Does not constitute approval and the Contractor is responsible for requirements in submittal.
 - 4. Review as Noted - Submittal has to be reviewed by the Port with comments as noted.
 - 5. Revise and Resubmit - Means, the submittal is not accepted because of major inconsistencies or errors. Do not proceed with the work. Resolve or correct before next submittal.
 - 6. Rejected - Submittal is rejected. Do not proceed with the work. Prepare a new submittal.
- B. Submittals marked "No Exceptions Taken", "Make Corrections Noted" or "Reviewed as Noted" authorizes Contractor to proceed with construction covered by those data sheets or shop drawings with corrections, if any, incorporated.
- C. When submittals or prints of shop drawings have been marked "Revise and Resubmit" or "Rejected-," Contractor shall make the necessary corrections and submit required copies. Every revision shall be shown by number, date, and subject in a revision block, and each revised shop drawing shall have its latest revision numbers and items clearly indicated by clouding around the revised areas on the shop drawing.
- D. Submittals authorized by the Engineer do not in any case supersede the Contract Documents. The approval by the Engineer shall not relieve the Contractor from responsibility to conform to the Drawings or Specifications, or correct details when in error, or ensure the proper fit of parts when installed. A favorable review by the Port of shop drawings, method of work, or information regarding material and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for errors therein and shall not be regarded as assumption of risk or liability by the Port or its officers, employees, or representatives. Contractor shall have no claim under the Contract on account of failure or partial failure, or inefficiency or insufficiency of any plan or method of work, or material and equipment so accepted. Favorable review means that the Port has no objection to Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the material and equipment proposed.
- E. It is considered reasonable that the Contractor's submittals shall be complete and acceptable by at least the second submission of each submittal. The Port reserves the right to deduct monies from payments due Contractor to cover additional costs for review beyond the second submission.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PREPARATION OF SUBMITTALS

- A. The Contractor shall use the Port supplied transmittal form for all submittals and email submittals in a clear PDF document to the Engineer at EMAIL.
- B. The Contractor shall use the eBuilder software to submit all shop drawings, catalog cuts, brochures including samplew which must be hand-delivered. Notes, clouding, arrows or other post document generation notations must be applied directly into the electronic file using software designed for that purpose. **Each submittal shall be accompanied by a transmittal developed within the eBuilder software.**
- C. A separate submittal shall be prepared for each product or procedure and shall be further identified by referencing the Specification Section and paragraph number and each submittal shall be numbered consecutively. An example of the numbering protocol is given here for an Electrical Submittal "26 05 33-001 - PVC Schedule 80 Conduit". If something is rejected and needs resubmitted it gets resubmitted with the same number adding an R for revised or .1, but the submittal number stays the same ALWAYS.
- D. Product submittals that cannot be accomplished electronically shall be accompanied by a printed version of the transmittal. These submittals will be hand delivered to the Port offices at One Sitcum Plaza, Attention: Engineering Department.
- E. Shop and detail drawings shall be submitted in related packages. All equipment or material details which are interdependent or are related in any way must be submitted indicating the complete installation. Submittals shall not be altered once marked "No Exceptions Taken" Revisions shall be clearly marked and dated. Major revisions must be submitted for approval.
- F. The Contractor shall thoroughly review all shop and detail drawings, prior to submittal, to assure coordination with other parts of the work.
- G. Components or materials which require shop drawings and which arrive at the job site prior to approval of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.
- H. All submittal packages including (but not limited to) product data sheets, mix designs, shop drawings and other required information for submittal must be submitted, reviewed and approved before the relevant scheduled task may commence. It is the responsibility of the Contractor to provide the submittal information which may drive a task on the construction schedule to submit items well enough in advance as to provide adequate time for review and comment from the Engineer without adversely impacting the construction schedule.
- I. When completing the eBuilder submittal form, a Date Due field is required to be completed. This field is intended to inform the Port of the urgency of the submittal. Failure of the Port to return the submittal by the date provided by the Contractor will not be considered grounds for a contract time extension.

3.02 MAINTENANCE OF SUBMITTAL LOG

- A. Prepare and submit for Port review a detailed submittal log conforming to the requirements of paragraph 1.02 of this section. When approved by the Engineer use the submittal log to track the transmittal of submittals to the Engineer, the receipt of submittal comments from the Engineer, and all subsequent action with respect to each submittal. Provide an updated copy of the submittal log to the Engineer during each weekly progress meeting, unless otherwise approved by the Engineer.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The work includes the requirements for health and safety provisions necessary for all work at the site for this project. The work also includes compliance with all laws, regulations and ordinances with respect to safety, noise, dust, fire and police action, civil disobedience, security or traffic.
- B. The Contractor shall monitor site conditions for indications of identified and other potentially hazardous, dangerous, and/or regulated materials (suspicious material). Indicators of suspicious material include, but are not limited to, refuse, oily sheen or coloring on soil or water, or oily or chemical odors. If suspicious materials are encountered, the Contractor shall stop all work in that area and notify the Engineer immediately.

1.02 SUBMITTALS

- A. Prior to the start of any Work, the Contractor shall provide a site specific Health and Safety Plan (HASP), which meets all the requirements of local, state and federal laws, rules and regulations. The HASP shall address all requirements for general health and safety and shall include but not be limited to:
 - 1. Description of work to be performed and anticipated chemical and/or physical hazards associated with the work.
 - 2. Map of the site(s) illustrating the location of the anticipated hazards and areas of control for those hazards (including containments, exclusion/work zones, and contaminant reduction/decontamination zones).
 - 3. Hazardous material inventory and safety data sheets (SDSs) for all chemicals which will be brought on site.
 - 4. Signage appropriate to warn site personnel and visitors of anticipated site hazards.
 - 5. Documentation that the necessary workers have completed the required Hazardous Waste Operations and Emergency Response (HAZWOPER) training.
 - 6. Engineering controls/equipment to be used to protect against anticipated hazards.
 - 7. Personal protective equipment and clothing including head, foot, skin, eye, and respiratory protection.
 - 8. Procedures which will be used for:
 - a. Lockout/Tagout;
 - b. Fall protection;
 - c. Trenching and shoring;
 - d. Hot work;
 - e. Explosive conditions due to methane;
 - f. Oxygen deficient conditions;
 - g. Asbestos and lead hazards;
 - h. Suspicious materials and/or unidentified materials;
 - i. Confined-space entry (could include dewatering storage tanks, manholes, or other items);

- j. Confined-space rescue;
- k. Odorous conditions and toxic gases.
- 9. Exposure monitoring to be used to evaluate actual hazards compared with anticipated conditions, including but not limited to arsenic exposure assessment.
- 10. Site housekeeping procedures and personal hygiene practices.
- 11. Personnel and equipment decontamination plan.
- 12. Railroad safety procedures.
- 13. Administrative controls.
- 14. Emergency plan including locations of and route to nearest hospital.
- 15. Medical surveillance program for site personnel before, during, and after completion of site work.
- 16. Recordkeeping including:
 - a. Documentation of appropriate employee training (e.g., Hazardous Waste Operations and Emergency Response [HAZWOPER] 40-hour training for staff involved with excavation and handling of soil)
 - b. Respirator fit testing
 - c. Arsenic exposure assessment results
- 17. Name and qualification of person preparing the HASP and person designated to implement and enforce the HASP.
- 18. Name and qualifications for Certified Safety Professional (CSP) or Certified Industrial Hygienist (CIH) and a copy of the CIH's or CSP's certification and resume.
- 19. Excavation, stockpiling, and truck loading procedures.
- 20. Lighting and sanitation.
- 21. Signatory page for site personnel to acknowledge receipt, understanding, and agreement to comply with the HASP.
- B. Prior to the start of any Work, the Contractor shall provide a site specific Spill Prevention, Control and Countermeasures (SPCC) Plan, which meets all the requirements of local, state and federal laws, rules and regulations.
- C. Contractor may submit the HASP and SPCC Plan as one comprehensive document or may submit the plans as separate documents.

1.03 POTENTIAL CHEMICAL HAZARDS

A. Site Contaminants

- 1. The Contractor must provide site workers with Hazard Communication standard information for potential site contaminants (in accordance with WAC 296-843). The Contractor shall ensure that all site workers are aware of and understand this information. Additional information shall also be provided by the Contractor, as necessary, to meet the Hazard Communication Standard and HASP requirements as noted in WAC 296-901-14010 and 296-843. Workers shall be instructed on basic methods or techniques to assist in detecting suspicious material.

2. The Project soils, in many areas, contain greater than 20 ppm of inorganic arsenic and the Contractor shall comply with all applicable requirements of Washington Department of Labor and Industries Division of Occupational Safety and Health (DOSH) Arsenic Standard, WAC 296-848 including but not limited to personal exposure monitoring, use of respirators and PPE, and worker training. Refer to WAC 296-848-100 Table 1 to determine applicable sections. Arsenic remnant soils are present throughout the site.

B. Potential Exposures Routes

1. Inhalation: Airborne dusts, fibers, particulates, or vapors may be released during site activities. Inhalation of airborne inorganic arsenic may occur.
2. Skin and Eye Contact: Dusts generated during site work activities may settle on the skin or clothing of site workers. Also, workers may contact potentially regulated sediments, or water, in the normal course of their work. Precautions to prevent skin or eye contact with hazardous materials will be included in the HASP. Arsenic exposure may cause skin irritation.
3. Ingestion: Inadvertent transfer of site contaminants from hands or other objects to the mouth could occur if site workers eat, drink, smoke, chew tobacco, or engage in similar activities in work areas. This could result in ingestion of site contaminants. Precautions to prevent accidental or inadvertent ingestion of hazardous materials will be included in the HASP.

- C. Chemical hazards may also result from Contractor operations resulting in inadvertent release of fuel, oil, or other chemicals in a manner that would expose workers.

1.04 POTENTIAL PHYSICAL AND OTHER HAZARDS

- A. The Work of the Contractor is described elsewhere in these specifications. Precautions to prevent all anticipated physical and other hazards, including heavy equipment and vessels, shall be addressed in the HASP.
- B. Specific aspects of construction resulting in physical hazards anticipated for this project include, but are not limited to the following:
1. Work over or adjacent to water, presenting hazards of falling into water, hypothermia from exposure to the elements, and drowning.
 2. Operation of marine equipment, including winches, dredges, and related equipment, entrapment, ensnarement, and being struck by moving parts hazards
 3. Completion of diver surveys with specific health and safety elements.
 4. Major hazards associated with earthwork impacts from moving construction vehicles and trucks, noise, thermal stress, contact with unguarded machines, excavation hazards (i.e., cave-in, utility, etc.), strains from heavy lifting, and reduced visibility and communications difficulties in work area.
 5. Operation of equipment, including excavators, loaders, and related equipment, presenting hazards of entrapment, ensnarement, and being struck by moving parts.
- C. Other anticipated physical hazards:
1. Heat stress, such as that potentially caused by impermeable clothing (may reduce the cooling ability of the body due to evaporation reduction).
 2. Cold stress, such as that potentially caused during times when temperatures are low, winds are high, especially when precipitation occurs during these conditions.

3. Biological hazards, such as mold, insect stings, or bites, poisonous plants (i.e., poison oak, sumac, etc.).

4. Trips and falls

D. Firewatch Procedures

1. A firewatch is implemented to ensure the fire-safety of a building, structure or area in the event of any act (e.g., hot work) or situation instigating an increased risk of fire. The term "firewatch" is used to describe a dedicated person or persons whose sole responsibility is to look for fires within an established area.
2. A firewatch is required when all hot work is being performed.
3. The firewatch is to perform the following functions:
 - a. Firewatch personnel are to keep diligent watch for fires in the general area where the work is being performed.
 - b. Firewatch personnel are to be familiar with facilities and procedures for sounding an alarm in the event of a fire.
 - c. Firewatch personnel are to have fire extinguishing equipment readily available and be trained in its use, including practice on test fires.
 - d. Firewatch personnel are to inspect the site prior to hot work activities to ensure that combustibles are removed or covered and that any nearby holes or penetrations in the ground and walls are sealed or covered with fire-safe materials.
 - e. Firewatch personnel are to watch for fires in all exposed areas. If a fire is located, firewatch personnel are to sound the evacuation alarm immediately and after that try to extinguish the fire only when obviously within the capacity of the equipment available.
 - f. The firewatch is to be maintained for at least 120 minutes after completion of hot work such as cutting, welding, or other open flame operations in order to detect and extinguish smoldering and flaming fires. During this time, the work area and other adjacent areas where sparks or flame may have traveled are to be searched for signs of combustion.

PART 2 - PRODUCTS

2.01 SAFETY SIGNAGE

- A. The Contractor shall provide signage at strategic locations within the project site to alert jobsite workers and visitors of the remediation work, associated hazards, and required precautions.

2.02 PRODUCTS SPECIFIED FOR HEALTH AND SAFETY

- A. Provide the equipment and supplies necessary to support the work as described in the site-specific HASP. Equipment and supplies may include but are not limited to:
 1. All chemicals to be used on site;
 2. A hazardous materials inventory and SDSs for the chemicals brought on site;
 3. Enclosure equipment (for dust and asbestos fiber control);
 4. Fencing and barriers;
 5. Warning signs and labels;

6. Trenching equipment;
7. Fire extinguishers;
8. Equipment to support hot work;
9. Equipment to support lockout/tagout procedures;
10. Scaffolding and fall protection equipment;
11. Personal protective equipment (hard hats, foot gear, skin, eye, and respiratory protection);
12. Area and personnel exposure monitoring equipment;
13. Demolition equipment and supplies;
14. Decontamination equipment and supplies;
15. First aid equipment;
16. Spill response and spill prevention equipment; and
17. Field documentation logs/supplies

PART 3 - EXECUTION

3.01 WORK AREA PREPARATION

- A. Contractor shall comply with health and safety rules, regulations, ordinances promulgated by the local, state, and federal government, the various construction permits, and other sections of the Contract Documents. Such compliance shall include, but not be specifically limited to: any and all protective devices, equipment and clothing; guards; restraints; locks; latches; switches; and other safety provisions that may be required or necessitated by state and federal safety regulations. The Contractor shall determine the specific requirements for safety provisions and shall have inspections and reports by the appropriate safety authorities to be conducted to ensure compliance with the intent of the regulations.
- B. Contractor shall inform employees, subcontractors and their employees of the potential danger in working with any potentially regulated materials, equipment, soils and groundwater at the project site.
 1. The Contractor shall not proceed with jobsite activities that might result in exposure of employees to hazardous materials, including arsenic, until the HASP is reviewed by the Engineer.
 2. In addition, the Engineer will submit a copy of the Contractor's HASP to Ecology for review. Ecology and the Engineer will review but not approve HASP.
- C. All Contractor employees expected to work at the jobsite or individuals entering the jobsite shall read the Contractor HASP before they enter the jobsite, and will sign a statement provided by the Contractor that they have read and understand the HASP. A copy of the Contractor's HASP shall be readily available at the site at all times the work is being performed.
- D. The Contractor's HASP shall be amended as needed by the CIH or CSP to include special work practices warranted by jobsite conditions actually encountered. Special practices could include provisions for decontamination of personnel and equipment, and the use of special equipment not covered in the initial plan.
- E. Contractor shall perform whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees of

the Engineer, Engineer's Representative, and Contractor) and property during the Contract period. This requirement applies continuously and is not limited to normal working hours.

- F. The Engineer's review of the Contractor's performance does not include an opinion regarding the adequacy of, or approval of, the Contractor's safety supervisor, the site-specific HASP, safety program or safety measures taken in, on, or near the job site.
- G. Accidents causing death, injury, or damage must be reported immediately to the Engineer and the Port Security Department in person or by telephone or messenger. In addition, promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.
- H. If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing within 24 hours after occurrence, to the Engineer, giving full details of the claim.

3.02 SITE SAFETY AND HEALTH OFFICER

- A. Contractor shall provide a person designated as the Site Safety and Health Officer, who is thoroughly trained in rescue procedures, has a minimum current 40-hour HAZWOPER certification (minimum), and trained to use all necessary safety equipment, air monitoring equipment, and gas detectors. The person must be available and/or present at all times while work is being performed, and conduct testing, as necessary.
- B. The Site Safety and Health Officer shall be empowered with the delegated authority to order any person or worker on the project site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from this project.
- C. The Site Safety and Health Officer is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the site.

3.03 SPILL PREVENTION AND CONTROL

- A. The Contractor shall be responsible for prevention, containment and cleanup of spilling petroleum and other chemicals/hazardous materials used in the Contractor's operations. All such prevention, containment and cleanup costs shall be borne by the Contractor.
- B. The Contractor is advised that discharge of oil, fuel, other petroleum, or any chemicals/hazardous materials from equipment or facilities into state waters or onto adjacent land is not permitted under state water quality regulations.
- C. In the event of a discharge of oil, fuel or chemicals/hazardous materials into waters, or onto land with a potential for entry into waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of all spilled material and used cleanup materials.
- D. The Contractor shall, at a minimum, take the following measures regarding spill prevention, containment and cleanup.
 - 1. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums and other equipment and facilities shall be inspected regularly for drips, leaks or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.
 - 2. All land-based chemical, oil and products' storage tanks shall be diked, contained and/or located so as to prevent spills from escaping into the water. Dikes and containment area

surfaces shall be lined with impervious material to prevent chemicals or oil from seeping through the ground and dikes.

3. All visible floating sheen shall be immediately contained with booms, dikes or other appropriate means and removed from the water prior to discharge into state waters. All visible spills on land shall be immediately contained using dikes, straw bales or other appropriate means and removed using sand, sawdust or other absorbent material, which shall be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leak-proof containers after cleanup and during transport to disposal. Waste materials shall be disposed offsite in accordance with applicable local, state and federal regulations.
 4. In the event of any oil or product discharges into public waters, or onto land with a potential for entry into public waters, the Contractor shall immediately notify the Port Security at their listed 24-hour response number:
 - a. Port Security: 253-383-9472
- E. The Contractor shall maintain the following materials (as a minimum) at each of the project sites:
1. Oil-absorbent booms: 100 feet.
 2. Oil-absorbent pads or bulk material, adequate for coverage of 200 square feet of surface area.
 3. Oil-skimming system.
 4. Oil dry-all, gloves and plastic bags.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section discloses procedures to follow if unknown regulated materials are encountered.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions, Supplementary Conditions, and General Requirements, apply to this work as specified in this section. Work related to this Section is described in, but not limited to:

1. Section 01 35 29 – Health, Safety, and Emergency Response Procedures
2. Section 01 74 19 – Waste Management and Disposal

1.03 NOTIFICATION AND SUSPENSION

- A. In the event the Contractor detects the presence of potentially regulated materials not previously identified in this specification, the Contractor shall stop work and immediately notify the Port. Following such notification by the Contractor, the Port shall in turn notify the various governmental and regulatory agencies concerned with the presence of regulated materials, if warranted. Depending upon the type of materials identified, the Port may suspend work in the vicinity of the discovery under the provisions of General Conditions.
1. Following completion of any further testing necessary to determine the nature of the materials involved, the Port will determine how the material shall be managed. Although the actual procedures used in resuming the work shall depend upon the nature and extent of the regulated material, the following alternate methods of operation are foreseen as possible:
 - a. Contractor to resume work as before the suspension.
 - b. Contractor to move its operations to another portion of the work until measures to eliminate any hazardous conditions can be developed and approved by the appropriate regulatory agencies.
 - c. The Port to direct the Contractor to dispose or treat the material in an approved manner.
 - d. The Port to terminate or modify the Contract accordingly, for unforeseen conditions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. The Work includes the requirements to provide air and noise control measures until Final Completion of the Work.

1.02 SUBMITTALS

- A. Prior to Notice to Proceed, the Contractor shall submit of a list of equipment to be used on the project and certify in writing that all equipment on the list and any additional equipment, including Contractor's, subcontractors or supplier's equipment, shall meet the requirements of 3.01 below.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION

3.01 AIR POLLUTION CONTROL

- A. The Contractor shall meet or exceed EPA Tier 2 off-road diesel engine emission standards for off-road equipment ≥ 25 hp and meet or exceed EPA 1994 on-road diesel engine emission standards for on-road equipment except as follows:
 - 1. Equipment being used in an emergency or public safety capacity
- B. The Contractor shall not discharge smoke, dust, and other hazardous materials into the atmosphere that violate local, state or federal regulations.
- C. No vehicles can idle for more than 5 consecutive minutes, except as follows:
 - 1. Idling is required to bring or maintain the equipment to operating temperature;
 - 2. Engine idling is necessary to accomplish work for which the equipment was designed (i.e. operating a crane)
 - 3. Idling vehicles being used in an emergency or public safety capacity.
- D. The Contractor shall minimize nuisance dust by cleaning, sweeping, vacuum sweeping, sprinkling with water, or other means. Equipment for this operation shall be on the job site or available at all times.

3.02 NOISE CONTROL

- A. The Contractor shall comply with all local controls and noise level rules, regulations and ordinances which apply to work performed pursuant to the Contract.
- B. All internal combustion engines used on the job shall be equipped with a muffler of a type recommended by the manufacturer.

END OF SECTION

PART 1 - GENERAL

1.01 PERMITS, CODES AND REGULATIONS

- A. The following permits/approvals have been applied for (or are on file) and incorporated into the Contract:
 - 1. City of Tacoma Commercial Alteration Permit #BLDCA 17-0585
 - 2. City of Tacoma Commercial Alteration Permit #BLDCA 17-0586
- B. Conform with the requirements of listed permits and additional or other applicable permits, codes, and regulations as may govern the Work.
- C. Obtain and pay fees for licenses, permits, inspections, and approvals required by laws ordinances, and rules of appropriate governing or approving agencies necessary for proper completion of Work (other than those listed under item 1.01A above and Special Inspections called for by the International Building Code).
- D. Conform with current applicable codes, regulations and standards, which is the minimum standard of quality for material and workmanship. Provide labor, materials, and equipment necessary for compliance with code requirements or interpretations, although not specifically detailed in Drawings or specifications. Be familiar with applicable codes and standards prior to bidding.
- E. Process through Engineer, request to extend, modify, revise, or renew any of the permits (listed in 1.01.A above). Furnish requests in writing and include a narrative description and adequate Drawings to clearly describe and depict proposed action. Do not contact regulatory agency with requests for permit extensions, modifications, revisions, or renewals without the prior written consent of the Engineer.

1.02 VARIATIONS WITH CODES, REGULATIONS AND STANDARDS

- A. Nothing in the Drawings and specifications permits Work not conforming to codes, permits or regulations. Promptly submit written notice of the Engineer of observed variations or discrepancies between the Contract Documents and governing codes and regulations.
- B. Appropriate modifications to the Contract Documents will be made by Change Order to incorporate changes to Work resulting from code and/or regulatory requirements. Contractor assumes responsibility for Work contrary to such requirements if Work proceeds without notice.
- C. Contractor is not relieved from complying with requirements of Contract Documents which may exceed, but not conflict with requirements of governing codes.

1.03 COORDINATION WITH REGULATORY AGENCIES

- A. Coordinate Work with appropriate governing or regulating authorities and agencies.
- B. Provide advance notification to proper officials of Project schedule and schedule revisions throughout Project duration, in order to allow proper scheduling of inspection visits at proper stages of Work completion.
- C. Regulation coordination is in addition to inspections conducted by Engineer. Notify Engineer at least 48 hours in advance of scheduled inspections involving outside regulating officials, to allow Engineer to be present for inspections.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Requirements relating to referenced standards.

1.02 QUALITY ASSURANCE

- A. For products or workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue specified in this section, except where a specific date is established by applicable code.
- C. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.
- D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 QUALITY CONTROL FOR COMPLIANCE:

- A. All work described in the Contract Documents must be fully tested in accordance with applicable sections of these Specifications. The provisions and intent of the Contract, including the General Conditions, Supplementary Conditions and General Requirements, apply to this work as if specified in this Section.
- B. The Contractor shall perform such detailed examination, inspection and quality control and assurance of the Work as to ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents. The Contractor shall plan and lay out all Work in advance of operations so as to coordinate all Work without delay or revision. The Contractor shall be responsible for inspection of portions of the Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no conditions shall a portion of Work proceed prior to preparatory work having been satisfactorily completed. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory work and has notified the Contractor (who shall promptly notify the Port in writing) of any defects or imperfections in preparatory work that will, in any way, affect completion of the Work.

1.02 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop Drawings or as instructed by the manufacturer.
- G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.04 REFERENCES AND STANDARDS

- A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

- B. Conform to reference standard by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Neither the contractual relationships, duties or responsibilities of the parties in Contract, nor those of the Engineer, shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.05 TESTING SERVICES

- A. Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities.
 - 1. Neither observations by an inspector retained by the Port, the presence or absence of such inspector at the site, nor inspections, tests, or approvals by others, shall relieve the Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.
- B. Necessary materials testing shall be performed by an independent testing laboratory during the execution of the Work and paid for by the Port of Tacoma, unless otherwise specified. Access to the area necessary to perform the testing and/or to secure the material for testing, shall be provided by the Contractor.
- C. Testing does not relieve Contractor to perform work to contract requirements.
- D. Re-testing required because of non-conformance to specified requirements shall be performed by the same independent firm. Payment for re-testing will be charged to the Contractor by deducting testing charges from the Contract Sum.
- E. Material testing for initial material approval will be performed by an independent, certified laboratory and paid for by the Contractor. These tests must be dated within six (6) months of the submittal date.
- F. Subsequent sampling and testing, required as the work progresses to ensure continual control of materials and compliance with all requirements of the Contract documents, shall be the responsibility of the Port, except as required by other sections of these Specifications.

1.06 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up equipment, test, and adjust and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer subject to approval of Engineer.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary Controls: Barriers, and enclosures.
- C. Removal of Utilities, Facilities and Controls.

1.02 TEMPORARY UTILITIES

- A. Port to provide and pay for all electrical power, and general lighting
- B. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.

1.03 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public to allow for Port's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.04 EXTERIOR ENCLOSURES

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.05 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as indicated to separate work areas from the Port-occupied areas, to prevent penetration of dust and moisture into the Port-occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces

1.06 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Clean and repair damage caused by installation or use of temporary work.
- B. Restore existing facilities used during construction to original condition.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Access roads.
- B. Parking.
- C. Construction parking controls.
- D. Traffic Control
- E. Flares and lights.
- F. Haul routes.
- G. Maintenance.
- H. Removal, repair.
- I. Mud from site vehicles.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 ACCESS TO SITE

- A. Contractor shall conduct all business through the Main Gate at Port of Tacoma Road and E. 11th St.
 - 1. The Contractor may be required to relocate entry and related work areas as required by Port Operations.

3.02 PARKING

- A. All Contractor's employee cars and work vehicles will be parked on-site as designated by the Engineer.

3.03 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Port operations.
- B. Prevent parking on or adjacent to access roads or in non-designated areas.

3.04 HAUL ROUTES

- A. Confine construction traffic to designated haul routes.
- B. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

3.05 REMOVAL, REPAIR

- A. Repair existing facilities damaged by use, to original condition.
- B. Repair damage caused by installation.

END OF SECTION

PART 1 - GENERAL

1.01 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 - PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 - EXECUTION

3.01 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.02 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.

- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Prevent contact with material that may cause corrosion, discoloration, or staining.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Cutting and patching.

1.02 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of the Port or separate Contractor.
- C. Project As-Built Documents: Accurately record actual locations of capped and active utilities.

PART 2 - PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-conforming work.
- C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work flush to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with a material approved by the engineer or inspector, to full thickness of the penetrated element.
- I. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

2. Match color, texture, and appearance.
3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.06 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions, Supplementary Conditions, and other sections of the General Requirements apply to this work as if specified in this section. Work related to this section is described throughout the specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.01 PROGRESS CLEAN-UP

- A. The Contractor shall clean the project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with all requirements for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials for the type of material to be stored.
 - 4. Coordinate progress cleaning for joint use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free from waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section _____.

- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.02 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds. in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.
 - f. Remove debris and surface dust from limited access spaces, including roofs, attics, and similar spaces.
 - g. Sweep concrete floors broom clean in unoccupied spaces.
 - h. Remove labels that are not permanent.
 - i. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - j. Leave Project clean and ready for occupancy.

3.03 REPAIR OF WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surface, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Touch up and otherwise repair and restore marred or exposed finishes and surface. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
2. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. This section includes construction waste management requirements.

1.02 DEFINITIONS

- A. Co-mingled or Off-site Separation: Collecting all material types into a single bin or mixed collection system and separating the waste materials into recyclable material types at an off-site facility.
- B. Construction, Demolition and Land-Clearing (CDL) Waste: Includes all nonhazardous solid wastes resulting from construction, remodeling, alterations, repair, demolition, and land clearing. Includes material that is recycled, reused, salvaged or disposed as garbage. This also includes uncontaminated soils that are designated as geotechnically unsuitable or excess excavation.
- C. Hazardous/Dangerous Waste: As defined by Chapter 70.105.010 Revised Code of Washington and 40 Code of Federal Register 261 and by Washington Administrative Code 173-303.
- D. Proper Disposal: As defined by the jurisdiction receiving the waste.
- E. Recyclable Materials: Products and materials that can be recovered and remanufactured into new products.
- F. Recycling: The process of sorting, cleaning, treating and reconstituting materials for the purpose of using the material in the manufacture of a new product. Can be conducted on-site (as in the grinding of concrete).
- G. Recycling Facility: An operation that is permitted to accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product.
- H. Salvage for Reuse: Existing usable product or material that can be saved and reused in some manner on the project site or other projects off-site.
- I. Salvage for Resale: Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.
- J. Source-Separated Materials: Materials that are sorted at the site into separate containers for the purpose of reuse or recycling.
- K. Sources Separation: Sorting the recovered materials into specific material types with no, or a minimum amount of, contamination on site.
- L. Time-Based Separation: Collecting waste during each phase of construction or deconstruction that results in primarily one major type of recovered material. The material is removed before it becomes mixed with the material from the next phase of construction.
- M. Garbage: Product or material typically considered to be trash or debris that is unable to be salvaged for resale, salvaged and reused, returned, or recycled.

1.03 PERFORMANCE GOALS

- A. General: Divert CDL waste to the maximum extent practicable from the landfill by one or a combination of the following activities:
 - 1. Salvage
 - 2. Reuse

3. Source separated CDL recycling
4. Co-mingled CDL recycling
- B. CDL waste materials that can be salvaged, resold, reused or recycled, include, but are not limited to the following:
 1. Clean dimensional wood, pallet wood, plywood, OSB, and particleboard
 2. Asphalt
 3. Concrete and concrete masonry units
 4. Ferrous and non-ferrous metals
 5. Field office waste paper, aluminum cans, glass, plastic, and cardboard
- C. Hazardous/Dangerous Wastes, contaminated soils and other hazardous materials such as paints, solvents, adhesives, batteries, and fluorescent light bulbs and ballasts shall be disposed of at applicable permitted facilities.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: The Contractor shall maintain compliance with all applicable Federal, State, or Local laws that apply to Construction Waste Management and material salvage, reuse, recycling and disposal.
- B. Disposal Sites, Recyclers and Waste Materials Processors: All facilities utilized for management of any materials covered under this specification must maintain all necessary permits as required by federal, state and local jurisdictions.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 SOURCE-SEPARATED CDL RECYCLING

- A. Provide individual containers for separate types of CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.02 CO-MINGLED CDL RECYCLING

- A. Provide containers for co-mingled CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.03 LANDFILL

- A. Provide containers for CDL waste that is to be disposed of in a landfill clearly labeled as such.

3.04 REMOVAL OF CDL WASTE FROM PROJECT SITE

- A. Transport CDL waste off Port's property and legally dispose of them.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures
 - 2. Final completion procedures
 - 3. Warranties
 - 4. As-Built Drawings

1.03 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

1.04 PROJECT SUBMITTALS

- A. Submittal of Project Warranties
- B. Record Drawings
 - 1. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous recordkeeping requirements and submittals in connection with various construction activities.
- C. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.05 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list) indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Port unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 3. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by the Contract Document or Engineer. Label with manufacturer's name and model number where applicable.
 - 4. Submit test/adjust/balance records.

5. Submit changeover information related to Port's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 1. Make final changeover of permanent locks and deliver keys to Port
 2. Complete startup and testing of systems and equipment
 3. Perform preventive maintenance on equipment used prior to Substantial Completion
 4. Instruct Port's personnel in operation, adjustment, and maintenance of products, equipment, and systems
 5. Advise Port of changeover in heat and other utilities
 6. Terminate and remove temporary facilities from Project site
 7. Complete final cleaning requirements
- D. Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Notice of Substantial Completion after inspection or will notify Contractor of items, either on the Contractor's list or additional items identified by the Engineer, that must be completed or corrected before notice will be issued.
 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.06 PUNCH LIST (LIST OF INCOMPLETE ITEMS)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of Construction.
 1. Organize list of spaces in sequential order.
 2. Organize items applying to each space by major elements.

1.07 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete and submit the following:
 1. Submittal of all remaining items, including as-built documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, surveys, and similar final record information and all other submittals defined in the Contract Documents.
 2. List of Incomplete Items: Submit copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (Punch List). Copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 2 days prior to date the work will be complete and ready for final inspection and tests. On

receipt of request, the Engineer will either proceed with inspection or notify contractor of unfulfilled requirements.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.08 FINAL ACCEPTANCE PROCEDURES

A. Submittals Prior to Final Acceptance:

1. Receipt and approval of application for final payment; due within seven (7) days of receipt of Final Completion by the Engineer.
2. Execution of all Change Orders.
3. Contractor's signed waiver and release of claims on the Engineer provided form.
4. Contractor's submittal of list of all suppliers and subcontractors and the total amounts paid to each on the Engineer provided form;
5. Contractor's submittal of a list of all subcontractors and suppliers requiring Affidavits of Wages paid on the Contract and certify that each of companies will submit an approved Affidavit of Wages paid to the Port within 30 days.

B. The Engineer will issue the Final Acceptance Memo upon receipt of the required submittals.

PART 2 - PRODUCTS

2.01 CONTRACTOR'S WARRANTY

- A. The Contractor warrants the labor, materials and equipment delivered under the contract to be free from defects in design, material, or workmanship, and against damage caused prior to final inspection. Unless otherwise specified, this warranty extends for a period of one (1) year from the date of Substantial Completion.
 1. Time of Submittal: Submit written warranties on request of Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit the Port's rights under warranty.
 2. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Port or Port tenants during construction.
 3. Submit Warranties to the Engineer as a submittal, as described in 01 33 00 – Submittal Procedures.
 4. Provide additional copies of each warranty in Operation and Maintenance Manuals as described in 01 78 23 – Operation and Maintenance Manuals.
- B. In the event of equipment failure, during such time or in such a location that immediate repairs are mandatory, the Contractor shall respond promptly (within 48 hours), irrespective of day of the week. If the Contractor is not available, the Port will affect repairs. The Contractor shall then reimburse the Port for parts and labor necessary to correct deficiencies as defined within the warranty clause and time.

2.02 AS-BUILT DRAWINGS

- A. Project As-Built Drawings: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
- B. Project As-Built Drawings shall be compiled by the Contractor and submitted to the Engineer for translation to the Record Drawings on a monthly basis.
 - 1. The Project As-Built Drawings will be submitted on paper full-sized (ANSI D) copy.
 - 2. Drawings shall be kept current and shall be done at the time the material and equipment is installed. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:
 - a. Additions – Red
 - b. Deletions – Green
 - c. Comments – Blue
 - d. Dimensions – Graphite
 - 3. Project As-Built Drawings must be complete and accepted by the Engineer before Final Completion is issued.
 - 4. As-Built Drawings shall be in accordance with horizontal and vertical control as shown on the drawings.

PART 3 – EXECUTION

3.01 MAINTENANCE OF AS-BUILT DRAWINGS

- A. The Contractor shall maintain at the Project site, in good order for ready reference by the Engineer, one complete copy of the Contract Documents, including Addenda, Change Orders, other documents issued by the Port, a current Progress Schedule, and approved Submittals. The Contractor shall also generate and keep on site all documents and reports required by applicable permits.
- B. The Contractor's As-Built Drawings shall be updated to record all changes made during construction. The location of all existing or new underground piping, valves and utilities, and obstructions located during the Work shall be appropriately marked until the Contractor incorporates the actual field dimensions and coordinates into the as-built drawings. The as-built drawings shall be updated at least weekly and before elements of the Work are covered or hidden from view. After the completion of the Work, the as-built drawings shall be provided to the Port.

END OF SECTION

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Operation and Maintenance Manual Submittal

1.02 SUBMITTALS

- A. Operation and Maintenance Data:
 - 1. For equipment, or component parts of equipment put into service during construction and operated by the Port, submit completed documents within ten days after acceptance.
 - 2. Submit 2 copies of completed documents 5 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of all document sets as required prior to final submission.
 - 3. Submit 2 sets of revised final documents in final form by Final Completion.

PART 2 - PRODUCTS

2.01 OPERATION AND MAINTENANCE MANUALS

- A. For large equipment (such as pumps, generators, machinery), the following information (minimum of 3 printed copies, plus one electronic copy on CD) shall be furnished for all items on the Project requiring operational and/or maintenance procedures and for any additional items indicated by the Engineer. Printed information shall be organized by the Contractor into appropriately sized 3-ring binders (no larger than 3"). The binders shall be sized for material approximately 8-1/2 by 11 inches, and the material in the binders shall not protrude beyond the covers. The binder(s) shall be divided with coversheets for each major item of equipment. The cover sheets shall be typewritten to indicate the name, type of equipment, and location(s) within the Project where installed. A neatly typewritten index shall be provided. Electronic information shall be in PDF format (additional formats where specified) and shall be organized with folders with appropriate file names so information is easily accessible:
 - 1. Equipment Maintenance Summary:
 - a. Provide the following information (as applicable, indicate 'N/A' where an item does not apply) in Excel spreadsheet format:
 - 1) Asset Number (to be provided by the Engineer at a later date)
 - 2) Description
 - 3) Plan Sheet Number
 - 4) Parcel Number
 - 5) Vendor
 - 6) Manufacturer
 - 7) Model Year
 - 8) Serial Number
 - 9) Warranty – Start Date; Finish Date
 - 10) Required Preventative Maintenance
 - 11) Purchase Price
 - 12) Make

- 13) Model
 - 14) Fuel Used
 - 15) Capacity
2. Lubrication Information: This shall consist of the manufacturer's recommendations regarding the lubricants to be used and the lubrication schedule to be followed. Lubricants shall be described in detail, including type, recommended manufacturer, and manufacturer's specific compound to be used.
 3. Control Diagrams: Diagrams shall show internal and connection wiring and as-built wiring diagrams (where applicable).
 4. Start-up Procedures: These instructions consist of equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.
 5. Operating Procedures: These instructions consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, stopping the equipment under specified modes of operation, and for long-term shut-down (moth-balling).
 6. Preventative Maintenance Procedures: These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment.
 7. Overhaul Instructions: These instructions consist of the manufacturer's directions for the disassembly, repair and reassembly of the equipment and any safety precautions that must be observed while performing the work.
 8. Parts List: This list consists of the generic title and identification number of each component part of the equipment. This list shall include weights of individual components of each item of equipment weighing over 100 pounds.
 9. Spare Parts List: This list consists of the manufacturer's recommendations of number of parts which should be stored by the Owner and any special storage precautions which may be required.
 10. Exploded View: Exploded or cut views of equipment shall be provided if available as a standard item of the manufacturer's information. When exploded or cut views are not available, plan and section views shall be provided with detailed callouts.
 11. Specific Information: Where items of information not included in the above list are required, they will be provided as described in the specifications for the equipment.
 12. Complete identification, including model and serial numbers.
 13. Submittal information, as specified in Section 01 33 00 Submittal Procedures.
 14. Warranty Information: This information consists of the name, address, and telephone number of the manufacturer's representative to be contacted for warranty, parts, or service information.
 15. Provide DVDs, and audio-visual training materials utilized in the manufacturer's instruction program for the Owner.
 16. All operation and maintenance information shall be comprehensive and detailed and shall contain information adequately covering all normal operation and maintenance procedures.
 17. All information shall be specific for the items of equipment installed on the project. Material not directly applicable shall be removed, omitted, or clearly marked as inapplicable.

18. If manufacturer's standard brochures and manuals are used to describe operating and maintenance procedures, such brochures and manuals shall be modified to reflect only the model or series of equipment used on this project.
 19. Extraneous material shall be crossed out neatly or otherwise annotated or eliminated. It shall be the responsibility of the Contractor to ensure that all operation and maintenance materials are obtained. Material submitted must meet the approval of the Engineer prior to project final acceptance.
- B. For small equipment and products (such as furnishings or equipment not requiring routine maintenance), the following information (minimum of 3 printed copies, plus one electronic copy on CD) shall be furnished for all items on the Project requiring operational and/or maintenance procedures and for any additional items indicated by the Engineer. Printed information shall be organized by the Contractor into appropriately sized 3-ring binders (no larger than 3"). The binders shall be sized for material approximately 8-1/2 by 11 inches, and the material in the binders shall not protrude beyond the covers. The binder(s) shall be divided with coversheets for each major item of equipment. The cover sheets shall be typewritten to indicate the name, type of equipment, and location(s) within the Project where installed. A neatly typewritten index shall be provided. Electronic information shall be in PDF format (additional formats where specified) and shall be organized with folders and appropriate file names so as to make the information easily accessible:
1. Product Summary:
 - a. Provide the following information (as applicable, indicate 'N/A' where an item does not apply) in Excel spreadsheet format:
 - 1) Asset Number (to be provided by the Engineer at a later date)
 - 2) Description
 - 3) Plan Sheet Number
 - 4) Parcel Number
 - 5) Vendor
 - 6) Manufacturer
 - 7) Model Year
 - 8) Serial Number
 - 9) Warranty – Start Date; Finish Date
 - 10) Purchase Price
 - 11) Make
 - 12) Model
 2. Operating Procedures: These instructions consist of the manufacturer's recommended step-by-step procedures for use of the product.
 3. Maintenance Procedures: These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the product.
 4. Specific Information: Where items of information not included in the above list are required, they will be provided as described in the specifications for the equipment.

5. Complete identification, including model and serial numbers.
6. Submittal information, as specified in Section 01 33 00 Submittal Procedures.
7. Warranty Information: This information consists of the name, address, and telephone number of the manufacturer's representative to be contacted for warranty, parts, or service information.
8. Provide DVDs, and audio-visual training materials utilized in the manufacturer's instruction program for the Owner.
9. All operation and maintenance information shall be comprehensive and detailed and shall contain information adequately covering all normal operation and maintenance procedures.
10. All information shall be specific for the items of equipment installed on the project. Material not directly applicable shall be removed, omitted, or clearly marked as inapplicable.
11. If manufacturer's standard brochures and manuals are used to describe operating and maintenance procedures, such brochures and manuals shall be modified to reflect only the model or series of equipment used on this project.
12. Extraneous material shall be crossed out neatly or otherwise annotated or eliminated. It shall be the responsibility of the Contractor to ensure that all operation and maintenance materials are obtained. Material submitted must meet the approval of the Engineer prior to project final acceptance.

PART 3 - EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Products furnished under this Section include the following: Pre-engineered steel mezzanine

1.03 COORDINATION

- A. Coordinate installation of the mezzanine structure with other work.

1.04 ACTION SUBMITTALS

- A. Shop Drawings: Show fabrication and installation details. Include plans, elevations, sections, and details of the mezzanine framing and their connections including connections to the existing building slab.
- B. Design calculations and structural drawings for review by the Engineer and sufficient for submittal to the Building Authority to obtain a building permit.
- C. Paint color and texture samples for approval by the Engineer.

1.05 INFORMATIONAL SUBMITTALS

- A. Mill Certificates: Signed by steel manufacturers, certifying that products furnished comply with requirements.
- B. Welding certificates.

1.06 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.07 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of construction contiguous with metal fabrications by field measurements before fabrication.
- B. Mezzanine must be designed to be supported by column baseplates bearing on the existing slab-on-grade. Due to suspected environmental concerns in the subgrade soils, no excavation below the slab or exposure of subgrade soils is permitted.

PART 2 - PERFORMANCE REQUIREMENTS

2.01 ALL METHODS, MATERIAL, AND WORKMANSHIP SHALL CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED AND ADOPTED BY THE LOCAL BUILDING AUTHORITY.

- A. Design criteria
 - 1. Design the mezzanine floor for minimum 250 psf live load
 - 2. Design the mezzanine for seismic loading including seismic loads per IBC section 1613 and ASCE 7 chapters 11 thru 13 with the following factors:

- a. Risk Category: II
- b. Seismic Importance Factor: 1.0
- c. Ss: 1.296
- d. S1:0.503
- e. Site Class: D
- f. Sds: 0.864
- g. Sd1:0.503
- h. Seismic Design Category: D

2.02 METALS

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.
- B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- C. Rolled-Steel WT Sections: ASTM A 992 Fy=50 ksi

2.03 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form exposed work with accurate angles and surfaces and straight edges.
- D. Weld corners and seams continuously to comply with the following:
 - 1. Use materials and methods that minimize distortion and develop the strength of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing.

2.04 STEEL COMPONENTS

- A. General: Provide steel components as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary for close and accurate fit-up with adjacent construction.

2.05 FINISHES, GENERAL

- A. Finish metal fabrications and adjacent metal surfaces after installation.

- B. Field prime steel components after installation using Universal Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
 - 1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.
- C. Preparation for Field Priming: Prepare unpainted/ unprimed surfaces to comply with SSPC-SP 3, "Power Tool Cleaning."
 - 1. Clean existing adjacent steel surfaces abraded, discolored, or otherwise affected by the work performed under this contract/work order
- D. Field Priming: Apply primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," on all unpainted surfaces of new steel components and to existing adjacent steel surfaces abraded, discolored, or otherwise affected by the work under this contract/work order.
 - 1. Stripe paint corners, crevices, welds, and sharp edges.
- E. Field paint all primed steel with paint that matches color and finish of steel framing adjacent to and unaffected by the work completed under this contract/work order. Verify that the type, manufacturer, color, and finish of the paint is acceptable to the Owner by submitting color and texture samples to the Owner for acceptance before acquiring the paint. The paint shall be compatible with the primer used.

2.06 ADJUSTING AND CLEANING

- A. Touchup Painting: clean abraded areas. Paint uncoated and abraded areas with the same material used for field priming to comply with SSPC-PA 1 for touching up field-painted surfaces.
 - 1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.
- B. Touchup Painting: Clean and touchup paint field welds and abraded areas of painted surfaces.

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural dimension lumber framing.
- B. Non-structural dimension lumber framing.
- C. Rough opening framing for doors, windows, and roof openings.
- D. Sheathing.
- E. Miscellaneous framing and sheathing.
- F. Concealed wood blocking, nailers, and supports.
- G. Miscellaneous wood nailers, furring, and grounds.

1.02 REFERENCE STANDARDS

- A. ANSI A208.1 - American National Standard for Particleboard; 2009.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- D. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2014.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- F. AWPA U1 - Use Category System: User Specification for Treated Wood; 2012.
- G. ICC (IBC) - International Building Code; 2015.
- H. PS 1 - Structural Plywood; 2009.
- I. PS 20 - American Softwood Lumber Standard; 2010.
- J. SPIB (GR) - Grading Rules; 2014.
- K. WCLIB (GR) - Standard Grading Rules for West Coast Lumber No. 17; 2004, and supplements.
- L. WWPA G-5 - Western Lumber Grading Rules; 2011.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

1.04 WARRANTY

- A. See Section 01 77 00, for additional warranty requirements.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.

1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Stud Framing (2 by 2 through 2 by 6):
 1. Grade: No. 2.
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16):
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 1. Lumber: S4S, No. 2 or Standard Grade.
 2. Boards: Standard or No. 3.

2.03 EXPOSED DIMENSION LUMBER

- A. Sizes: Nominal sizes as indicated on drawings.
- B. Surfacing: S4S.
- C. Moisture Content: S-dry or MC19.

2.04 TIMBERS FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry (23 percent maximum).
- C. Beams and Posts 5 inches and over in thickness:
 1. Grade: Select Structural.

2.05 STRUCTURAL COMPOSITE LUMBER

- A. At Contractor's option, structural composite lumber may be substituted for concealed dimension lumber and timbers.

2.06 CONSTRUCTION PANELS

- A. Wall Sheathing: Any PS 2 type.
 1. Bond Classification: Exterior.
 2. Grade: Structural I Sheathing.
 3. Span Rating: 24.
 4. Performance Category: 5/16 PERF CAT.
 5. Edge Profile: Square edge.
- B. Wall Sheathing: Plywood, PS 1, Grade C-D, Exposure I.

- C. Wall Sheathing: Particleboard, ANSI A208.1, Grade M-3 EXTERIOR GLUE.
- D. Wall Sheathing: Gypsum, complying with requirements of ASTM C1396/C1396M for gypsum sheathing, V-shaped long edges, 5/8 inch Type X fire resistant.
 - 1. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly.

2.07 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 - 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.
 - 3. Anchors: Toggle bolt type for anchorage to hollow masonry.
- B. Die-Stamped Connectors: Hot dipped galvanized steel, sized to suit framing conditions.
 - 1. For contact with preservative treated wood in exposed locations, provide minimum G185
- C. Construction Adhesives:
 - 1. Manufacturers:
 - a. Franklin International, Inc; Titebond Fast Set Polyurethane Construction Adhesive: www.titebond.com/sle;
 - b. Liquid Nails Polyurethane Construction Adhesive: www.liquidnails.com/en-US/products/construction-adhesive-LN950
 - c. Approved equal to above.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.

2.08 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
 - 2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
- B. Fire Retardant Treatment:
 - 1. Manufacturers:
 - a. Arch Wood Protection, Inc;.
 - b. Hoover Treated Wood Products, Inc;.
 - c. Koppers, Inc;
 - d. Viance, LLC; D-Blaze
 - e. Approved equal to above

- f. Substitutions: See Section 01 60 00 - Product Requirements.
 - 2. Interior Type A: AWP A U1, Use Category UCFA, Commodity Specification H, low temperature (low hygroscopic) type, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.
 - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
 - b. All interior rough carpentry items are to be fire retardant treated.
 - c. Treat rough carpentry items as indicated .
 - d. Do not use treated wood in applications exposed to weather or where the wood may become wet.
- C. Preservative Treatment:
- 1. Manufacturers:
 - a. Arch Wood Protection, Inc
 - b. Koppers Performance Chemicals, Inc;
 - c. Viance, LLC; Preserve ACQ
 - d. Approved equal to above.
 - e. Substitutions: See Section 01 60 00 - Product Requirements.
 - 2. Preservative Pressure Treatment of Lumber Above Grade: AWP A U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber exposed to weather.
 - c. Treat lumber in contact with roofing, flashing, or waterproofing.
 - d. Treat lumber in contact with masonry or concrete.
 - e. Treat lumber less than 18 inches above grade.
 - 3. Preservative Pressure Treatment of Plywood Above Grade: AWP A U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative.
 - a. Kiln dry plywood after treatment to maximum moisture content of 19 percent.
 - b. Treat plywood in contact with roofing, flashing, or waterproofing.
 - c. Treat plywood in contact with masonry or concrete.
 - d. Treat plywood less than 18 inches above grade.
 - e. Treat plywood in other locations as indicated.

PART 3 EXECUTION

3.01 PREPARATION

- A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches and seal.

- B. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.
- C. Coordinate installation of rough carpentry members specified in other sections.

3.02 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.03 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.
- E. Install horizontal spanning members with crown edge up and not less than 1-1/2 inches of bearing at each end.
- F. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
- G. Provide bridging at joists in excess of 8 feet span as detailed. Fit solid blocking at ends of members.
- H. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.04 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.
- C. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.
- D. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- E. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
- F. Provide the following specific non-structural framing and blocking:

1. Wall brackets.
2. Handrails.
3. Wall-mounted door stops.
4. Joints of rigid wall coverings that occur between studs.

3.05 INSTALLATION OF CONSTRUCTION PANELS

- A. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.
 1. Use plywood or other acceptable structural panels at building corners, for not less than 96 inches, measured horizontally.
 2. Provide inlet diagonal bracing at corners.

3.06 SITE APPLIED WOOD TREATMENT

- A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
- B. Allow preservative to dry prior to erecting members.

3.07 TOLERANCES

- A. Framing Members: 1/4 inch from true position, maximum.
- B. Surface Flatness of Floor: 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.
- C. Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

3.08 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.

3.10 CLEANING

- A. Waste Disposal: Comply with the requirements of Section 01 74 19 - Waste Management.
 1. Comply with applicable regulations.
 2. Do not burn scrap on project site.
 3. Do not burn scraps that have been pressure treated.
 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- B. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section. Work related to this section is described in:
 - 1. Contract drawings.

1.02 SUMMARY

- A. Section Includes:
 - 1. Insulation System for Pre-Engineered Metal Buildings – Existing Construction.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

1.04 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product.

1.05 QUALITY ASSURANCE

- A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- B. Source Limitation: Obtain each type of building insulation through one source from a single manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.01 GLASS-FIBER BLANKET INSULATION

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Owens Corning.
 - 2. Johns Manville.
 - 6. Or approved equal.
- B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 991, Type I; complies with NAIMA 202-96-REV 2000; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84, NFPA 255 and UL 723.
 - 1. Minimum 50% recycled content (20% post-consumer and 30% pre-consumer).
 - 2. Minimum R-Values, R30 roof and R21 walls. Ensure insulation fills all wall and roof framing voids to minimize condensation. Actual R-Value may be greater than minimum in some areas. May require 2 or more layers of insulation in some areas.

3. Insulation shall be unfaced.

2.04 VAPOR RETARDER

- A. Products: Subject to compliance with requirements, provide one of the following:
 1. Owens Corning "Optiliner" system.
 2. Johns Manville GL-30 system.
 3. Or approved equal.
- B. Technical Requirements:
 1. Material Standards: Complies with ASTM C1136, Types I through Type VI
 3. Fire Resistance: Complies with ASTM E 84 surface burning characteristics; Maximum flame spread index of 25, and Maximum smoke developed index of 50.
 4. Water Vapor Permeance: Less than or equal to 0.02 perm, ASTM E 96, Procedure A.
 5. Color: White.

2.05 VAPOR BARRIER ADHESIVE

- A. Products: Subject to compliance with requirements, provide one of the following:
 1. Owens Corning "Optiliner" system.
 2. Johns Manville GL-30 system
 3. Or approved equal
- B. Technical Requirements:
 1. Application Temperature 10°F to 110°F.
 2. Double sided vapor barrier tape. Complies with the following:
 - a. Width 0.75".
 - b. Rubber based and free film.
 3. Patch tape. Complies with the following:
 - a. adhesive added to one side.
 - b. Application Temperature 10°F to 110°F.
 - c. 3" width.

2.06 METAL BANDING/STRAPS

Products: Subject to compliance with requirements, provide one of the following:

1. Owens Corning "Optiliner" system.
2. Johns Manville GL-30 system.
3. Or approved equal.

B. Technical Requirements:

1. Coated steel.
2. Structural Steel Grade 50 per ASTM C 653.
3. Exposed color to match vapor barrier – White.
4. Backing - gray.

2.07 THERMAL BREAKS

A. Products: Subject to compliance with requirements, provide one of the following:

1. Owens Corning "Optiliner" system.
2. Johns Manville GL-30 system.
3. Or approved equal .

B. Technical Requirements:

1. Closed cell polyethylene foam tape for wall applications complies with the following:
 - a. 0.125" thick to 0.375" thick.
 - b. 3" wide.
2. Thermal space blocks complies with the following:
 - a. Extruded or expanded polystyrene,
 - b. Minimum width 3.0".
 - c. Thickness 0.5"-1.0".

2.08 LIGHT GAGE STEEL FASTENERS

A. Products: Subject to compliance with requirements, provide one of the following:

1. Owens Corning "Optiliner" system.
2. Johns Manville GL-30 system,
3. Or approved equal.

B. Technical Requirements:

1. Zinc plated cold forged steel.
2. Head color to match vapor barrier – white.
3. Contains rubber sealing washer.

2.09 HEAVY GAGE STEEL FASTENERS

A. Products: Subject to compliance with requirements, provide one of the following:

1. Owens Corning "Optiliner" system.
2. Johns Manville GL-30 system,
3. Or approved equal.

B. Technical Requirements:

1. Zinc plated cold forged steel.
2. Head color to match vapor barrier – white.
3. Contains rubber sealing washer.

2.10 INSULATION HANGERS

A. Products: Subject to compliance with requirements, provide one of the following:

1. Owens Corning "Insul-Hold" hangers.
2. Johns Manville GL-30 system,
3. Or approved equal.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Clean substrates of substances that are harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders, or that interfere with insulation attachment.

3.02 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.
- B. Comply with Washington State Non-Residential Energy Code for Building Envelope Sealing.
- C. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.
- D. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- E. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.
- F. Avoid gaps, voids and any excess compression of the light density fiberglass insulation.

3.03 PROTECTION

- A. Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2011.
- C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2014.
- D. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2011.
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- F. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable; 2015.
- G. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2014.
- H. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
- I. ITS (DIR) - Directory of Listed Products; current edition.
- J. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; 2007.
- K. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2016.
- L. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2016.
- M. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2012.
- N. UL (DIR) - Online Certifications Directory; current listings at database.ul.com.
- O. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- C. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.

1.04 QUALITY ASSURANCE

- A. Maintain at project site copies of reference standards relating to installation of products specified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Hollow Metal Doors and Frames:
 - 1. Ceco Door, an Assa Abloy Group company.
 - 2. De La Fontaine Inc; Hollow Metal Door:.
 - 3. Mesker, dormakaba Group; FDJ Series Drywall Frames:
 - 4. Republic Doors;.
 - 5. Steelcraft, an Allegion brand:
 - 6. Approved equal to above.
 - 7. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 DESIGN CRITERIA

- A. Requirements for Hollow Metal Doors and Frames:
 - 1. Steel used for fabrication of doors and frames shall comply with one or more of the following requirements; Galvannealed steel conforming to ASTM A653/A653M, cold-rolled steel conforming to ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel conforming to ASTM A1011/A1011M, Commercial Steel (CS) Type B for each.
 - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

- A. Door Finish: Factory finished.
- B. 20 Minute Fire-Rated Doors:
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 2 - Heavy-duty.
 - b. Physical Performance Level B, 5000,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 1 - Full Flush.
 - d. Door Face Metal Thickness: 18 gage, 0.042 inch, minimum.
 - 2. Fire Rating: tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
 - 3. Temperature-Rise Rating (TRR) Across Door Thickness: In accordance with local building code and authorities having jurisdiction.
 - 4. Provide units listed and labeled by UL (DIR) or ITS (DIR).
 - a. Attach fire rating label to each fire rated unit.

2.04 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Door Frames, Fire-Rated: Knock-down type.
 - 1. Fire Rating: Same as door, labeled.

2.05 FINISHES

- A. Primer and Paint: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

2.06 ACCESSORIES

- A. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.
- B. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Install fire rated units in accordance with NFPA 80.
- C. Coordinate frame anchor placement with wall construction.
- D. Install heavy-duty door hardware complying with NFPA and ADA requirements.
- E. Touch up damaged factory finishes.

3.02 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.03 ADJUSTING

- A. Adjust for smooth and balanced door movement.

END OF SECTION

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Insulated service doors.

1.03 SUBMITTALS

- A. Product Data: For each type and size of overhead coiling door and accessory.
 - 1. Include construction details, material descriptions, dimensions of individual components, profiles for slats, and finishes.
 - 2. Include rated capacities, operating characteristics, electrical characteristics, and furnished accessories.
 - 3. Include description of automatic-closing device and testing and resetting instructions.
- B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data.
 - 1. Include plans, elevations, sections, and mounting details.
 - 2. Include details of equipment assemblies, and indicate dimensions, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Include points of attachment and their corresponding static and dynamic loads imposed on structure.
 - 4. For exterior components, include details of provisions for assembly expansion and contraction and for excluding and draining moisture to the exterior.
 - 5. Show locations of controls, locking devices, and other accessories.
- C. Samples for Initial Selection: Manufacturer's finish charts showing full range of colors and textures available for units with factory-applied finishes.
 - 1. Include similar Samples of accessories involving color selection.
- D. Samples for Verification: For each type of exposed finish on the following components, in manufacturer's standard sizes:
 - 1. Curtain slats.
 - 2. Bottom bar.
 - 3. Guides.
 - 4. Hood.

1.04 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

1.05 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For overhead coiling doors to include in maintenance manuals.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer for both installation and maintenance of units required for this Project.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Source Limitations: Obtain overhead coiling doors from single source from single manufacturer.
 - 1. Obtain operators and controls from overhead coiling-door manufacturer.

2.02 PERFORMANCE REQUIREMENTS

- A. Structural Performance, Exterior Doors: Capable of withstanding the following design wind loads:
 - 1. Design Wind Load: Uniform pressure (velocity pressure) of 20 lbf/sq. ft., acting inward and outward.
 - 2. Testing: According to ASTM E 330/E 330M.
 - 3. Deflection Limits: Design overhead coiling doors to withstand design wind load without evidencing permanent deformation or disengagement of door components.
 - 4. Operability under Wind Load: Design overhead coiling doors to remain operable under uniform pressure (velocity pressure) of 20-lbf/sq. ft. wind load, acting inward and outward.

2.03 DOOR ASSEMBLY

- A. Service Door: Overhead coiling door formed with curtain of interlocking metal slats.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Lawrence Doors Model MD Service Door or approved equal.
- B. Operation Cycles: Door components and operators capable of operating for not less than 20,000 cycles. One operation cycle is complete when a door is opened from the closed position to the fully open position and returned to the closed position.
 - 1. Include tamperproof cycle counter.
- C. STC Rating: 25.
- D. Curtain R-Value: 8.0 deg F x h x sq. ft./Btu.
- E. Door Curtain Material: Galvanized steel, minimum 24 gauge.
- F. Door Curtain Slats: Flat profile slats of manufacturer's standard center-to-center height.
- G. Bottom Bar: Two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch thick; fabricated from hot-dip galvanized steel or aluminum extrusions and finished to match door.
- H. Curtain Jamb Guides: Galvanized steel with exposed painted finish.
- I. Hood: Match curtain material and finish.
 - 1. Shape: Round.
 - 2. Mounting: Face of wall.
- J. Locking Devices: Equip door with s chain lock keeper.
- K. Manual Door Operator: Chain-hoist operator.

- L. Curtain Accessories: Equip door with weatherseals.
- M. Door Finish:
 - 1. Powder-Coated Finish: Color as selected by the Engineer from manufacturer's full range.
 - 2. Interior Curtain-Slat Facing: Match finish of exterior curtain-slat face.

2.04 MATERIALS, GENERAL

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.05 DOOR CURTAIN MATERIALS AND CONSTRUCTION

- A. Door Curtains: Fabricate overhead coiling-door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:
 - 1. Steel Door Curtain Slats: Zinc-coated (galvanized), cold-rolled structural-steel sheet; complying with ASTM A 653/A 653M, with G90 zinc coating; nominal sheet thickness (coated) of 0.028 inch; and as required.
 - 2. Insulation: Fill slats for insulated doors with manufacturer's standard thermal insulation complying with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84 or UL 723. Enclose insulation completely within slat faces.
 - 3. Metal Interior Curtain-Slat Facing: Match metal of exterior curtain-slat face, with minimum steel thickness of 0.025 inch.
- B. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats unless otherwise indicated, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain, and to meet loads for a continuous bar for holding windlocks.

2.06 HOODS

- A. General: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portion of between-jamb mounting that projects beyond wall face. Equip hood with intermediate support brackets as required to prevent sagging.
 - 1. Galvanized Steel: Nominal 0.024-inch-thick, hot-dip galvanized-steel sheet with G90 zinc coating, complying with ASTM A 653/A 653M.

2.07 LOCKING DEVICES

- A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on both left and right jamb sides, operable from coil side.
- B. Chain Lock Keeper: Suitable for padlock.

2.08 CURTAIN ACCESSORIES

- A. Weatherseals for Exterior Doors: Equip each exterior door with weather-stripping gaskets fitted to entire exterior perimeter of door for a weather-resistant installation unless otherwise indicated.

1. At door head, use 1/8-inch-thick, replaceable, continuous-sheet baffle secured to inside of hood or field-installed on the header.
 2. At door jambs, use replaceable, adjustable, continuous, flexible, 1/8-inch-thick seals of flexible vinyl, rubber, or neoprene.
- B. Astragal for Interior Doors: Equip each door bottom bar with a replaceable, adjustable, continuous, compressible gasket of flexible vinyl, rubber, or neoprene as a cushion bumper.

2.09 COUNTERBALANCE MECHANISM

- A. General: Counterbalance doors by means of manufacturer's standard mechanism with an adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to top of curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.
- B. Counterbalance Barrel: Fabricate spring barrel of manufacturer's standard hot-formed, structural-quality, carbon-steel pipe, of sufficient diameter and wall thickness to support rolled-up curtain without distortion of slats and to limit barrel deflection to not more than 0.03 in./ft. of span under full load.
- C. Counterbalance Spring: One or more oil-tempered, heat-treated steel helical torsion springs. Size springs to counterbalance weight of curtain, with uniform adjustment accessible from outside barrel. Secure ends of springs to barrel and shaft with cast-steel barrel plugs.
- D. Torsion Rod for Counterbalance Shaft: Fabricate of manufacturer's standard cold-rolled steel, sized to hold fixed spring ends and carry torsional load.
- E. Brackets: Manufacturer's standard mounting brackets of either cast iron or cold-rolled steel plate.

2.10 MANUAL DOOR OPERATORS

- A. General: Equip door with manual door operator by door manufacturer.
- B. Chain-Hoist Operator: Consisting of endless steel hand chain, chain-pocket wheel and guard, and gear-reduction unit with a maximum 25-lbf force for door operation. Provide alloy-steel hand chain with chain holder secured to operator guide.

2.11 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM/NOMMA 500 for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.12 STEEL AND GALVANIZED-STEEL FINISHES

- A. Powder-Coat Finish: Manufacturer's standard baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for cleaning, pretreatment, application, and minimum dry film thickness.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates areas and conditions, with Installer present, for compliance with requirements for substrate construction and other conditions affecting performance of the Work.
- B. Examine locations of electrical connections.

- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install overhead coiling doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.
- B. Install overhead coiling doors, hoods, controls, and operators at the mounting locations indicated for each door.

3.03 ADJUSTING

- A. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion.
 - 1. Adjust exterior doors and components to be weather resistant.
- B. Lubricate bearings and sliding parts as recommended by manufacturer.
- C. Adjust seals to provide tight fit around entire perimeter.

3.04 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain overhead coiling doors.

END OF SECTION

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

1.02 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Maintenance Materials: Furnish the following for Port's use in maintenance of project.
 - 1. Curved Sign Media Suction Cups: One for each 100 signs; for removing media.

1.03 FIELD CONDITIONS

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.01 SIGNAGE APPLICATIONS

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Interior Directional and Informational Signs: Fire Egress Routes

2.02 SIGN TYPES

- A. Flat Signs: Signage media without frame.
 - 1. Edges: Square.
 - 2. Corners: Square.
 - 3. Wall Mounting of One-Sided Signs: Tape adhesive.
- C. Color and Font: Unless otherwise indicated:
 - 1. Character Font: Helvetica, Arial, or other sans serif font.
 - 2. Character Case: Upper case only.
 - 3. Background Color: Clear.
 - 4. Character Color: Contrasting color.

2.03 TACTILE SIGNAGE MEDIA

- A. Engraved Panels: Laminated colored plastic; engraved through face to expose core as background color:
 - 1. Total Thickness: 1/16 inch.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Protect from damage until Substantial Completion; repair or replace damaged items.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 GENERAL

- A. Includes, but not limited to, furnishing labor, materials, and equipment for completion of work unless indicated or noted otherwise.
- B. This Contractor shall obtain and pay for all permits required by State and local authorities governing the installation of the mechanical work. It is the Contractor's responsibility to contact all utility organizations serving the building, prior to bid, and to include all charges for inspections, installation of materials, equipment and connection of all required utilities.
- C. Furnish exact location of electrical connections and complete information on motor controls to Division 26.
- D. The accessibility to HVAC equipment shall take precedence over all other equipment in the ceiling interstitial spaces or other mechanical areas including, but not limited to, sprinkler piping, heating piping, domestic water piping and electrical conduit (except fire pump rooms where as fire sprinkler equipment takes precedence).

1.03 SUBMITTALS REQUIREMENTS OF THIS SECTION

- A. Commissioning Report

1.04 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies:
 - 1. Perform work in accordance with applicable Codes.
 - 2. See Section 00 72 00 for additional requirements.
- B. Product Approvals: See paragraphs elsewhere in this specification.
- C. Warranties:
 - 1. In addition to guarantee specified in General Conditions, guarantee heating, cooling, and plumbing systems to be free from noise in operation that may develop from failure to construct system in accordance with Contract Documents.
 - 2. In order to be protected, secure proper guarantees from suppliers and Subcontractors.
 - 3. Provide certificates of warranty for each piece of equipment. Clearly record "start-up" date of each piece of equipment on certificate. Include certificates as part of Operation & Maintenance Manual.
- D. Identification: Motor and equipment name plates as well as applicable UL and AGA labels shall be in place when Project is turned over to Port.

1.05 PERMITS & FEES

- A. The Contractor shall obtain and pay for all licenses, permits and inspections required by laws, ordinances and rules governing work specified herein. The Contractor shall arrange for inspection of work by the inspectors and shall give the inspectors all necessary assistance in their work of inspection.

1.06 CODES AND STANDARDS

- A. Codes and agencies having jurisdictional authority over mechanical installation.
 - 1. Washington State Energy Code -- Latest Approved Edition
 - 2. International Building Code -- Latest Approved Edition
 - 3. International Fire Code - Latest Approved Edition
 - 4. International Mechanical Code -- Latest Approved Edition
 - 5. Uniform Plumbing Code -- Latest Approved Edition
 - 6. Local Sewer and Water District Requirements
 - 7. State and County Department of Health
 - 8. Local Fire Marshal
 - 9. Puget Sound Air Pollution Control
 - 10. State of Washington Boiler and Unfired Pressure Vessel Inspection Law
 - 11. Occupational Safety and Health Administration (OSHA)
 - 12. Washington Industrial Safety and Health Act (WISHA)
 - 13. National Fire Protection Association (NFPA)

1.07 SYSTEMS DESCRIPTION

- A. Site Inspection:
 - 1. Examine premises and understand the conditions which may affect performance of work of this Division before submitting proposals for this work.
 - 2. No subsequent allowance for time or money will be considered for any consequence related to failure to examine site conditions.

1.08 DESIGN DRAWINGS

- A. Mechanical drawings are not shop drawings and are intended to show general arrangement of piping, ductwork, equipment, etc. Follow as closely as actual building construction and work of other trades will permit.
- B. Consider architectural, structural and electrical drawings part of this work in so far as these drawings furnish information relating to design and construction of building. Architectural drawings take precedence over mechanical drawings.
- C. Because of small scale of mechanical drawings, it is not possible to indicate all offsets, fittings, and accessories which may be required. The Contractor shall include in the bid a sufficient quantity of offsets, fittings, and accessories for the size of the project, based upon the contractor's experience, necessary to facilitate mechanical utility installation. No additional costs shall be charged for additional offsets, fittings, and accessories required to install the mechanical utilities shown on the design drawings. Investigate structural and finish conditions affecting this work and arrange work accordingly, providing such fittings, valves, and accessories required to meet conditions.

1.09 PRE-CONSTRUCTION COORDINATION MEETING

- A. The Contractor is responsible to participate in coordination meetings with the other subcontractors needing to coordinate special requirements (such as electrical contractor, HVAC contractor, plumbing contractor, etc.)
- B. Coordination meetings shall consider elevations, required clearances, and routings of all trades to assure that all trades can be installed without conflict.
- C. The outcome of this coordination shall allow each system (Mechanical, Fire Protection, Plumbing, Electrical, etc.) to be installed without further conflicts for space or locations.
- D. Failure to coordinate with other trades and/or existing conditions that result in the removal and re-installation of systems shall not be charged as additional costs.

1.10 ELECTRICAL

- A. All electrical work, conduit, boxes and devices in connection with control wiring as required to install the control equipment as specified herein or shown on the drawings shall be furnished and installed complete by the Division 26 Contractor.
- B. All electrical work performed under this Section of the Specifications shall conform to all applicable portions of the Division 26 specifications and shall conform to all governing codes.
- C. All equipment shall be factory wired to a junction box for connection to electrical service.
- D. Where a piece of equipment specified includes an electric motor, the motor shall be furnished and mounted by the Contractor. Motor starter, disconnect switches and wiring from the electrical panel to the motor control devices and to the motor shall be provided by the Contractor unless stated otherwise in the mechanical specification and/or on the mechanical drawings.
- E. All motor controllers and equipment panels (including but not limited to packaged equipment, custom control panels, custom air handler panels) shall comply with NEC (including, but not limited to, marking on controllers and labeling requirements).

1.11 PRODUCT HANDLING AND PROTECTION

- A. Contractor is responsible for protection of all material, equipment and apparatus provided under this Section from damage, water, corrosion, freezing and dust, both in storage and when installed, until final project acceptance.
- B. Completely cover motors and other moving machinery to protect from dirt and water during construction.
- C. Handle and protect equipment and/or material in manner precluding unnecessary fire hazard.
- D. Material or equipment damaged because of improper storage or protection will be rejected.
- E. Equipment finish that is damaged by handling, storage, etc. shall be corrected by the Contractor at no additional cost to the Port.

1.12 DEFINITIONS

- A. Finished Spaces: Spaces used for habitation or occupancy where rough surfaces are plastered, paneled, or otherwise treated to provide a pleasing appearance.
- B. Unfinished Spaces: Spaces used for storage or work areas, such as fan rooms, mechanical and boiler rooms, etc., where appearance is not a factor.

- C. Concealed Spaces: Spaces out of sight. For example, above ceilings; below floors; between double walls; furred-in areas; pipe and duct shafts; and similar spaces.
- D. Exposed: Open to view. For example, pipe running through a room and not covered by other construction.
- E. Outside: Open to view up to 5 feet beyond the exterior side of walls, above the roof, and unexcavated or crawl spaces.
- F. Conditioned Space: An area, room or space normally occupied and being heated or cooled for human habitation by any equipment as defined by the extent of the building envelope insulation.
- G. Replace: Existing mechanical equipment and components shall be demolished and discarded from the project site or as directed otherwise. New mechanical equipment and components shall be installed in the area where the existing mechanical equipment and components were demolished or as indicated on the contract documents.
- H. Removed: Existing mechanical equipment and components identified on the contract documents shall be taken apart, taken down, and discarded from the project site unless directed otherwise on plan. Removed items shall not be brought back to the project site for use or reinstallation.
- I. Reinstall: Existing mechanical equipment and components identified on the contract documents that need to be taken down and installed in the same or new location.

1.13 ABBREVIATIONS

ADA	Americans with Disabilities Act
A/E	Architect/Engineer
AFF	Above Finish Floor
AGA	American Gas Association
AMCA	Air Moving & Conditioning Association
ANSI	American National Standards Institute
APWA	American Public Works Association
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing & Materials
AWWA	American Water Works Association
BFF	Below Finish Floor
BHP	Brake Horsepower
BTU	British Thermal Unit
CFM	Cubic Feet per Minute
CISPI	Cast Iron Soil Pipe Institute

fpm	feet per minute
FS	Federal Specifications
F.D.C.	Fire Department Connection
F.D.C.	Flush Cleanout
F.D.	Floor Drain
FWH	Freeze Proof Wall Hydrant
GPM	Gallons per Minute
HP	Horsepower
IAPMO	International Association of Plumbing and Mechanical Officials
IAQ	Indoor Air Quality
IEEE	Institute of Electrical and Electronics Engineers
KW	Kilowatt
LPG	Liquefied Petroleum Gas
MBH	One Thousand British Thermal Units per Hour
MS or Mil.Spec.	Military Specifications
MSS	Manufacturers Standardization Society
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NP	Non-Potable Water
NPSH	Net Positive Suction Head
OS&Y	Outside Screw and Yoke
P.I.V.	Post Indicator Valve
PDI	Plumbing and Drainage Institute
per	in accordance with

POC	Point of Connection
PSI	Pounds per Square Inch Gauge Pressure
PVC	Polyvinyl Chloride
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SP	Static Pressure
SWP	Steam Working Pressure
UL	Underwriter's Laboratories
VFD	Variable Frequency Drive
VTR	Vent Thru Roof
w.g.	Water Gauge (inches of water)
W.P.	Working Pressure
WPL	Weatherproof Louver
WQA	Water Quality Association

Additional abbreviations are as listed on the drawings or elsewhere in these specifications.

1.14 OPERATION AND MAINTENANCE MANUAL FOR MECHANICAL SYSTEMS

- A. Provide Operation & Maintenance Manual per Section 01 78 23.

1.15 COMMISSIONING

- A. General Requirements: The building systems shall be tested to ensure that control devices, components, equipment, and systems are calibrated, adjusted, and operate in accordance with the approved plans and specifications.
- B. Commissioning Plan: A commissioning plan shall be prepared and shall include at a minimum the following:
1. A detailed explanation of the design intent.
 2. Equipment and systems to be tested.
 3. Functions to be tested (for example, economizer control, discharge air temperature control, etc.)
 4. Conditions under which the test shall be performed.
 5. Measureable criteria for acceptable performance.
- C. Controls Functional Performance Testing: Functional testing shall demonstrate the correct installation and operation of each component, system, and system to system intertie relationship in accordance with the plans and specifications. This demonstration is to prove

operation, function, and maintenance serviceability for each of the commissioned systems. Testing shall include all modes of operation, including:

1. All modes as described in the sequence of operation.
 2. Performance of alarms.
 3. Mode of operation upon a loss of power and restored power.
 4. The HVAC control system shall be tested to ensure that control devices, components, equipment, and systems are calibrated, adjusted, and operate in accordance with the plans and specifications.
- D. Post Construction Documentation: Provide Operation and Maintenance (O&M) data, as-built record drawings, and Port training as specified in this section.
- E. Final Commissioning Report: Provide a complete report of test procedures and results and submitted to the Engineer. The report shall identify the following:
1. Procedures and results of all functional performance tests.
 2. Disposition of all deficiencies found during testing, including details of corrective measures used or proposed.

1.16 AS-BUILT DRAWINGS

- A. The Contractor shall maintain, in addition to coordination drawings, an as-built set of prints that clearly identify all deviations from the original design. The As-Built drawings shall be per Section 01 77 00.

PART 2 PRODUCTS

2.01 NOT APPLICABLE

PART 3 EXECUTION

3.01 WORKMANSHIP

- A. This Contractor shall provide completed systems with a neat and finished appearance. If, in the judgment of the Engineer, any portion of the work has not been performed in a workmanlike manner or is left in a rough, unfinished state, this Contractor will be required to remove, reinstall or replace same and patch and paint surrounding surfaces in a manner acceptable to the Engineer, without increase in cost to the Port.

3.02 FINAL INSPECTION

- A. Final Inspection:
1. Prior to acceptance of the mechanical work, the Contractor shall put all mechanical systems into operation for a period of not less than 5 working days so that they may be inspected by the Engineer.
 2. The time of the final inspection shall be mutually agreed to by the Port, Engineer, and Contractor.

3.03 SUBMITTALS - AT CLOSEOUT

- A. Requirements: Final approval of mechanical installation will be recommended upon completion of the following:
1. Completion of all punchlist items
 2. Permit Submittal

3. Reproducible As-Built drawings delivered to Architect
4. Asbestos Free Statement
5. Guarantees
6. Equipment Manufacturer of all HVAC compressor units shall provide start-up logs.
7. EMCS Trend Logs.

3.04 INSTALLATION

- A. Install mechanical equipment to permit easy access for normal maintenance, and so that parts requiring periodic replacement or maintenance, (e.g., coils, heat exchanger bundles, sheaves, filters, motors, bearings, etc.) can be removed. Relocate items, which interfere with access.
- B. If circumstances at a particular location make the accessible installation of an item difficult or inconvenient, the situation shall be discussed with the Engineer before installing the item in a poor access location.
- C. Provide offsets around all electrical panels (and similar electrical equipment) to maintain space clear above and below panel to structure and clearance of 3.5 feet directly in front of panel, except where indicated otherwise or required by NEC to be more. Such offsets are typically not shown on the drawings, but are required per this paragraph.
- D. Ensure that items to be furnished fit space available. Make necessary field measurements to ascertain space requirements including those for connections and furnish and install equipment of size and shape so final installation shall suit true intent and meaning of Contract Documents.
- E. Pipe Installation: Install piping in longest reasonable lengths. The use of short lengths of pipe with multiple couplings where a single length of pipe could have been used is not acceptable.

END OF SECTION

PART 1 GENERAL

1.01 GENERAL

- A. Includes, but not limited to, the following:
 - 1. Provide all material, labor, equipment, design, and services necessary to extend the existing wet pipe automatic fire protection sprinkler system for the new mezzanine addition, in accordance with the required and advisory provisions of the latest edition of N.F.P.A. #13 accepted by the Authority having Jurisdiction (City of Tacoma), The City of Tacoma Fire Prevention, and project specifications, except as modified herein.
 - 2. The Fire Protection Sprinkler System Contractor shall obtain a permit and final approval from the City of Tacoma for the fire protection sprinkler system. All permits, fees for plan review, inspections, testing, etc. shall be included in the bid proposal.
 - 3. The Fire Protection Sprinkler System Contractor shall simultaneously submit shop drawings, hydraulic calculations, seismic bracing calculations, and manufacturer's data sheets to the local Authority Having Jurisdiction and Engineer for review and shall be approved by the Engineer prior to the purchase, fabrication, or installation of any system component as detailed in Paragraph 1.09 of Specification Section 21 13 15.

1.02 GENERAL SYSTEM REQUIREMENTS

- A. The Fire Protection Sprinkler System Contractor shall connect to the cross main or system riser of the existing wet-pipe sprinkler system to extend sprinkler protection beneath the new storage mezzanine.
- B. The fire protection details shown on the contract documents are conceptual in nature.
- C. Devices and equipment for fire protection service shall be U.L. listed or Factory Mutual Global approved for use in wet pipe sprinkler systems.
- D. Failure to coordinate with other trades and/or existing conditions that result in the removal and re-installation of systems shall not be charged as additional costs.

1.03 SITE INSPECTIONS OF EXISTING BUILDINGS PRIOR TO BIDDING

- A. The Fire Protection Sprinkler System Contractor shall examine premises and understand the existing conditions that may affect performance of Fire Protection Standpipe System Contractor's work of this Division before submitting proposals and/or bids for this work.
- B. No subsequent allowance for time or costs will be considered for any consequence related to failure to examine site conditions.
- C. Existing site conditions may not be fully depicted on the contract documents and is the bidding Fire Protection Sprinkler System Contractor's responsibility to full understand the existing conditions of the project.

1.04 LOCATION OF SPRINKLER HEADS

- A. New sprinkler shall be installed in a consistent pattern while avoiding all lights, ductwork, and structural members.
- B. Spacing of sprinkler heads shall not exceed that permitted by N.F.P.A. #13 for Ordinary Group 2 occupancy.

1.05 SPRINKLER DENSITY AND DISCHARGE AREA OF OPERATION

- A. Size piping to provide the required density when the system is discharging over the entire most demanding area.
- B. Using the "Pipe Schedule" method to determine pipe sizing will not be allowed.
- C. Basing hydraulic calculations on the "Room Design" method to determine pipe sizing will not be allowed.
- D. Application rates to horizontal surfaces below the sprinklers (floor area) shall be 0.20 g.p.m. per square feet over the hydraulically most demanding 1,500 square feet for ordinary hazard group II occupancy.
- E. A reduction in remote area may be used where quick response sprinkler heads are utilized in light or ordinary hazard occupancy where there are no unprotected ceiling pockets and the maximum ceiling height is 20'-0".

1.06 HOSE STREAM ALLOWANCES

- A. Ordinary hazard occupancy shall require 250 g.p.m. combined hose streams.

1.07 WATER SUPPLY

- A. Base pipe hydraulic calculations (for the bid) on a flow test performed on October 2, 1995 of 98 p.s.i. static pressure with a residual pressure of 87 p.s.i. while flowing 4,378 g.p.m. Test hydrant elevation is approximately 12 feet (from Google Earth) and is located at Ashton Way and Port of Tacoma Road. Flow test information provided by Tacoma Water.
- B. Available water supply for hydraulic calculations may be based on existing base of riser demand, as shown on the existing hydraulic placards.

1.08 PIPE HANGER DETAILS

- A. Provide pipe hanger details and seismic bracing details in strict accordance with N.F.P.A #13 and manufacturer's literature.
- B. Details shall be unique to each installation configuration with all components clearly identified including the means of attachment and structure to be attaching to.
- C. For all trapeze hangars, provide a table indicating the size of the pipe to be supported, size and type of the trapeze member, section modulus of the trapeze member, distance from the structure to pipe being supported (A and B dimensions), and the section modulus required.

1.09 SEISMIC BRACING OF NEW SYSTEM MAINS

- A. Calculations.
 - 1. Seismic brace calculation requirements shall be based upon Section 1613.1 of the 2015 Edition of the International Building Code (I.B.C.) and Chapter 13 of ASCE 7-10.
 - 2. The "General Notes" sheets for the structural drawings contained in the contract documents defines the "Seismic Design Category" for this project.
 - 3. Per Section 13.6.8.2 of ASCE 7-10, fire protection sprinkler piping, pipe hangers, and bracing designed and constructed in accordance with N.F.P.A. #13 shall be deemed to meet the force and displacement requirements of this section.

4. Provide seismic calculations for each seismic brace configuration showing the total calculated load, size of bracing material, type of bracing material, length of bracing material, seismic brace design angle, allowable load of the bracing component, allowable horizontal bracing load of the sprinkler system, structure for bracing connection, size of fastener, length of fastener, allowable load per fastener, and the number of braces required.
5. Each seismic brace configuration shall have a unique identifier associated with the calculation to easily and readily identify which seismic brace calculation it is.
6. Seismic bracing members for connections to structural members shall be sized per assigned load tables in N.F.P.A. #13 with a maximum L/R ratio of 200.
7. The "Total Calculated Load" divided by the "Allowable Load per Fastener" shall not exceed a maximum value of 0.90.

B. Drawings:

1. The submittal drawings shall identify the "Zone of Influence" for each seismic brace configuration that is provided with a seismic brace calculation.
2. The submittal drawings shall identify each seismic brace on the submittal drawings by the same unique identifier indicated in the seismic brace calculations to easily and readily cross reference the seismic brace calculation associated with that particular seismic brace.

C. Details:

1. Seismic bracing details may be incorporated into the seismic bracing calculations to form a single detail for each brace configuration.
2. The seismic brace details shall identify the seismic brace member, length of brace member, angle of brace member installation, the structural member the seismic brace is attaching to, the fastener to be utilized, and all seismic brace components by Manufacturer and model number.

1.10 SUBMITTALS REQUIREMENTS OF THIS SECTION

A. Equipment submittals shall include, at a minimum, the following:

1. Piping
2. Fittings / Couplings
3. Sprinklers, / Head Guards & Shields
4. Pipe Hangers
5. Seismic Bracing Components

B. Refer to Section 01 33 00 for submittal requirements.

1.11 QUALIFICATIONS

A. Design of Fire Protection Sprinkler Systems

1. Contractor shall be the following:
 - a. Section 212.80.018(1)(c) of the "Washington Administrative Code" (WAC) requires the design of the Fire Protection Sprinkler System to be by a contractor holding a minimum State of Washington Level 3 License for fire protection designs related to N.F.P.A. #13D, N.F.P.A. #13R, and N.F.P.A. #13 systems.

2. Individual shall be one of the following:
 - a. Section 212.80.018(2)(a)(iii) of the "Washington Administrative Code" (WAC) requires a designer of the Fire Protection Sprinkler System to be an individual holding a minimum State of Washington Level 3 Certificate of Competency for fire protection designs related to N.F.P.A. #13D, N.F.P.A. #13R, and N.F.P.A. #13 systems.
 - b. Section 212.80.015(2)(d) of the "Washington Administrative Code" (WAC) requires a registered professional engineer in the State of Washington to prepare the fire protection designs related to N.F.P.A. #13D, N.F.P.A. #13R, and N.F.P.A. #13 systems.
- B. Installation of Fire Protection Sprinkler Systems
 1. Contractor shall be the following:
 - a. Section 212.80.018(1)(c) of the "Washington Administrative Code" (WAC) requires the installation of the Fire Protection Sprinkler System to be by a contractor holding a State of Washington Level 3 License for fire protection installations related to N.F.P.A. #13D, N.F.P.A. #13R, and N.F.P.A. #13 systems.
 2. Installation shall be by an individual certified per "Washington Administrative Code" (WAC) 212.80.018(2).
- C. The installing Fire Protection Sprinkler System Contractor shall have a minimum of five (5) years' experience in the design, installation, and testing of wet pipe automatic fire protection sprinkler systems, or similar fire protection systems. A list of installations of a similar nature and scope shall be provided on request.

1.12 PIPING SYSTEM LAYOUT

- A. Prepare detailed working drawings that are not larger than the contract documents for the system layout in accordance with N.F.P.A. #13, "Working Drawings (Plans)". Show data essential for the proper installation of each fire protection sprinkler system per N.F.P.A. #13 consisting of floor plans (1/8" = 1'-0" minimum), piping details, and elevations to clearly show pipe routing, head spacings, system water supply, devices, valves, and fittings.
- B. A graphical scale shall be provided for each floor plan or detail on the shop drawings in accordance with N.F.P.A. #13, "Working Drawings (Plans)".
- C. The minimum text size on full scale drawings shall be 1/8" high.
- D. The cover sheet of the shop drawings shall clearly state the scope of Contractor's work, Contractor's exclusions, Contractor's start point, which version of N.F.P.A. #13 was used for the sprinkler design, pipe scheduled criteria, and current water flow information used in the pipe scheduled calculations.
- E. The key plan shall be located in the lower right-hand corner of the drawing, shall identify the location of the fire protection sprinkler system work that is contained on that sheet, and shall contain a reference north arrow.

1.13 WARRANTIES

- A. In addition to the guarantee specified in General Conditions, the Fire Protection Sprinkler System Contractor shall guarantee that the new extension of the existing fire protection sprinkler system is installed to N.F.P.A. code and approved shop drawings.

- B. Provide a "Certificate of Warranty" letter at the completion of the project. The date of "Substantial Completion" shall be clearly shown on the letter indicating when the warranty period begins and the "Certificate of Warranty" letter shall be signed by the Fire Protection Sprinkler System Contractor.
- C. The "Certificate of Warranty" shall be included as part of the Operation and Maintenance Manual. The date of "Substantial Completion" shall be the date indicated on the approved test certificate that was signed by the Authority Having Jurisdiction for system acceptance.

1.14 AS-BUILT DRAWINGS

- A. Refer to Specification Section 01 77 00 for As-Built requirements and procedures.

PART 2 PRODUCTS

2.01 ABOVEGROUND PIPING SYSTEMS

- A. Provide fittings for changes in direction of piping and for connections. Make changes in piping sizes through tapered reducing pipe fittings and perform all welding in the shop. Bushings and field welding will not be permitted.
- B. All fire protection system components, devices, and materials installed as part of this project shall be new.
- C. All new fire protection system components and devices shall be domestically manufactured. Imported components will not be allowed.

2.02 SPRINKLER PIPE AND FITTINGS

- A. All above-ground wet pipe automatic sprinkler system pipe and fittings shall meet the following criteria:
 - 1. Threaded or Cut Groove: Black and galvanized steel pipe Schedule 40 for sizes less than 8 inches. Piping with a lesser schedule value (thinner walled pipe i.e. "Dyna-Thread", Schedule 10, or other Schedule 40 "Replacement" pipe) will not be allowed for threaded or cut groove connections regardless of the corrosion resistance ratio.
 - 2. Roll Groove or Welded: Black and galvanized steel pipe to be either having a minimum wall thickness in accordance with Schedule 10, Schedule 40, U.L. listed, or Factory Mutual Global approved pipe having a U.L. corrosion resistance ratio equal to or greater than 1.0.
 - 3. All fire protection piping and fittings (above-ground) shall be threaded, grooved, flanged, or welded fittings. The use of plain end, lock-type, friction type, compression type, or any other type of fitting that is plain end ("prepared end", "polished end", beveled end, "FIT" end such as Victaulic "FIT", Gruvlok "Sock-It", Victaulic "Pressfit") is not permitted.

2.03 SPRINKLER HEADS

- A. General:
 - 1. Provide minimum nominal ½-inch orifice commercial sprinkler heads.
 - 2. Provide intermediate level sprinklers or provide intermediate level shields to sprinklers beneath open-grate platforms with sprinkler protection above.

2.04 DRAINS

- A. Provide auxiliary drains for trapped sections of system piping.
- B. Coordinate all drain locations with the Port.

2.05 PIPE HANGERS

- A. Hanger components shall be U.L. listed or Factory Mutual Global approved.
- B. Hangers shall be connected directly to major frame members (Beams, etc.) wherever possible with connections to secondary framing members (joists, purlins, etc.) being made only when necessary and shall be coordinated with the Structural Engineer.
- C. All C-clamp type hangers shall be fitted with retainer straps.
- D. Hangers consisting of a hanger ring, all thread rod, and a hanger ring attached to a pipe at a higher elevation will not be allowed.

2.06 SEISMIC BRACING COMPONENTS

- A. General:
 - 1. Seismic braces shall be connected directly to major frame members (Beams, etc.) wherever possible with connections to secondary framing members (joists, purlins, etc.) being made only when necessary and shall be coordinated with the Structural Engineer.

2.07 WALL PLATES

- A. Provide a split hinge type metal plate for piping passing through walls, floors, platforms, and ceilings installed in exposed spaces.
- B. Wall plates shall either be chrome plated or factory painted to match the surrounding color scheme.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Installation, workmanship, fabrication, assembly, erection, examination, inspection, and testing shall be in accordance with N.F.P.A. #13, except as modified herein.
- B. Cutout disks that are created when cutting in mechanical tee type outlets shall be secured with nylon zip ties or metal wiring near the location from which the cutout disk was cut.
- C. The Fire Protection Sprinkler System Contractor shall remove and replace any new piping joints deemed improperly installed or show signs of leakage.
- D. The Fire Protection Sprinkler System Contractor shall remove and replace any new piping that has been damaged upon installation and shows signs of being bent, warped, or dented.
- E. Do not install sprinklers heads that have been dropped, damaged, show signs of corrosion, show signs of foreign matter buildup, show signs of a cracked glass bulb, or show a visible loss of fluid.
- F. The glass bulb protector shall remain in place until the sprinkler head is completely installed. The Fire Protection Sprinkler System Contractor shall remove the glass bulb protector by hand after installation and prior to the sprinkler system being placed in service.
- G. Install piping straight and true to bear evenly on hangers and supports. Hangers for piping to attach to structural members with no hanger being attached to acoustical ceiling tiles or gypsum wallboard ceilings.

- H. Ends of new piping and existing piping affected by the Fire Protection Sprinkler System Contractor's operations shall be thoroughly cleaned of water, cutting oil, and foreign matter. Keep piping systems clean during installation by means of plugs or other approved methods and securely close open ends of piping when work is not in progress to prevent entry of foreign matter. Inspect all piping before placing into position for foreign matter and remove as necessary.
- I. Install piping at such heights and in such a manner so as not to obstruct any portion of windows, doorways, passageways, or lights.

3.02 FIRE PROTECTION SPRINKLER SYSTEM CONTRACTORS RESPONSIBILITY FOR EXISTING BUILDINGS

- A. Cut carefully to minimize necessity for repairs to existing work. Do not cut beams, columns, or trusses.
- B. This work shall be scheduled such that services and/or existing systems for the facility are not interrupted during normal operating hours, without prior written permission of the Port's representative. Work that is performed during normal operational hours shall not interfere with the normal function of the facility's daily operation.
- C. Existing system piping and fittings that have been removed for any reason including demolition work and system modifications, shall not be re-installed. New system piping and fittings are required and shall meet the requirements of Paragraph 2.02.
- D. The Fire Protection Sprinkler System Contractor shall also be responsible for the removal and reinstallation of all existing fire protection equipment that will interfere with installation and operation of any new construction indicated or required at no additional costs to the Port.

3.03 RESTRAINT OF NEW SPRINKLER SYSTEM BRANCH LINES

- A. New sprinkler system branch lines shall be laterally restrained at intervals not exceeding those specified in Table 9.3.6.4(a) of the 2013 Edition of N.F.P.A. #13 and are based upon the branch line diameter and the seismic coefficient value of C_p .

- 1. Table 9.3.6.4(a) of the 2013 Edition of N.F.P.A. #13.

Steel Piping Pipe Diameter (in)	Seismic Coefficient (C_p)		
	$C_p \leq 0.50$	$0.5 < C_p \leq 0.71$	$C_p > 0.71$
1	43	36	26
1¼	46	39	27
1½	49	41	29
2	53	45	31

3.04 PREPARATION OF SPRINKLER PIPING FOR PAINTING IN EXPOSED AREAS

- A. The Fire Protection Sprinkler System Contractor shall clean the exterior surface to the sprinkler piping that is to be painted. The piping shall be cleaned and prepped in the following manner.
 - 1. The Fire Protection Sprinkler System Contractor shall remove all pipe tags or fabrication labels that have been adhered to the sprinkler system piping as part of the listing/fabrication process.

2. Any adhesive that remains on the sprinkler piping after removal of the pipe tags or fabrication labels shall be removed with an acceptable adhesive solvent.
3. All sprinkler piping and fittings that show signs of surface rust shall be sanded to remove the rust from the sprinkler piping.
4. Sprinkler system piping shall be wiped down with a solvent soaked rag to remove cutting oil residue, finger prints, adhesive solvents, and other foreign materials that could prevent the primer and/or finished color coats of paint from adhering properly to the sprinkler system piping.

3.05 HYDROSTATIC TEST

- A. The Fire Protection Sprinkler System Contractor shall isolate the new work from the existing fire protection sprinkler system for testing with a threaded or grooved cap.
- B. Hydrostatically test all new piping at 200 P.S.I. for a 2-hour period with no leakage or reduction in pressure.
- C. When tests have been completed and corrections made, submit a signed and dated certificate similar to that specified in N.F.P.A. #13.
- D. After testing is complete, remove cap and connect new piping to existing system.

3.06 FORMAL TESTS AND INSPECTIONS

- A. Do not submit a request for formal test and inspection until the preliminary test and corrections are completed and approved.
- B. Submit a written request to local fire protection authority for formal inspection at least 15 days before the inspection date.
- C. An experienced technician regularly employed by the system installer shall be present during the inspection.
- D. At this inspection, repeat any or all of the required tests as directed.
- E. Correct defects in work provided by the Fire Protection Sprinkler System Contractor and make additional tests until the system(s) comply with contract requirements.
- F. Furnish appliances, equipment, electricity, instruments, connecting devices and personnel for the tests.
- G. The Port will furnish water for the tests.
- H. Furnish Engineer with three (3) copies of certificates required by testing agencies.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section. Work related to this section is described in:
 - 1. Section 20 00 00 - "General Mechanical Requirements"

1.02 GENERAL REQUIREMENTS

- A. This section includes, but not limited to vibration isolation and seismic restraint installation for all equipment, ductwork, and piping as described here-in.
- B. Seismic Restraints shall be bidder-designed. Seismic Design Criteria are to be established per the International Building Code and ASCE 7-10 along with Project Structural drawings.
- C. Items not included in this specification shall not relieve the contractor of the responsibility of providing seismic bracing that meets all the criteria required by the referenced codes and in accordance with the seismic design guidelines and the project structural drawings.

1.03 REFERENCED CODE AND STANDARDS

- A. The latest adopted versions of the following codes and standards apply to this section.
 - 1. International Building Code (IBC)
 - 2. National Fire Protection Association (NFPA-13)
 - 3. Seismic Restraint Manual - Guidelines for Mechanical Systems (SMACNA)
 - 4. ASCE 7-10, American Society of Civil Engineers "Minimum Design Loads for Buildings and Other Structures"
 - 5. Applicable Project Structural Drawings for Seismic Design Criteria
 - 6. Applicable Manufacturer's Seismic Design Guides for proprietary listed seismic bracing and mounting hardware
 - 7. Where there is a conflict in requirements between these guidelines and above-mentioned codes the more stringent parameters shall prevail.

1.04 DESIGN CRITERIA

- A. Occupancy Category of Structure (I-IV) per IBC or ASCE 7-10
- B. Component Importance Factor (I_p) per ASCE 7-10
- C. Mapped Acceleration Parameters (S_1 and S_s) per IBC and Project Structural Drawings
- D. Site Class (A - F) per IBC and Project Structural Drawings
- E. Site Coefficient (F_a) per IBC and Project Structural Drawings
- F. Site Coefficient (F_v) per IBC and Project Structural Drawings
- G. Seismic Design Category (A - D) based on Short Period Response Accelerations per IBC and Project Structural Drawings
- H. Seismic Design Category (A - D) based on 1-Second Period Response Acceleration per IBC and Project Structural Drawings
- I. Amplification Factor a_p per ASCE 7-05

J. Response Modification Factor R_p per ASCE 7-05

1.05 SUBMITTAL REQUIREMENTS

A. Seismic Control:

1. All brace or restraint components, mounting devices, snubbers and anchors.

1.06 OPERATION AND MAINTENANCE REQUIREMENTS OF THIS SECTION

A. Not Applicable

PART 2 PRODUCTS

2.01 APPROVED MANUFACTURERS

A. Not Applicable

2.02 NEOPRENE ISOLATORS

- A. Isolation Pads: Oil resistant neoprene pads, minimum 1/4-inch thick, with cross-ribbed or waffle design. Size pads for not more than 50 psi or as recommended by vibration isolator manufacturer.

2.03 SEISMIC RESTRAINTS

A. General:

1. All seismic hangers and components shall be domestically made. Products designed domestically and fabricated in a foreign country are prohibited.
2. Products not permitted include: powder actuated anchors, gas actuated anchors, or anchors requiring epoxy.
3. Only Steel or Ductile Iron components shall be provided. No Cast Iron or Cast Aluminum components are allowed.
4. Steel shall be per ASTM A36; hangers and other devices shall be as shown in "SMACNA Seismic Restraint Manual" or approved manufacturers seismic design guidelines.

B. Seismic Bracing (rigid and cable):

1. Approved Manufacturers:
 - a. Tolco
 - b. International Seismic Application Technology (ISAT)
 - c. Mason Industries
 - d. Cooper B-Line
 - e. Kinetics Noise Control
 - f. AFCON
 - g. Gripple
 - h. PHD
 - i. Unistrut
 - j. Anvil or approved equal.

C. Seismic Anchorages (for wood, steel and concrete):

1. Approved Manufacturers:
 - a. Hilti
 - b. ITW Ramset/Red Head
 - c. ITW Buildex
 - d. Mason Industries
 - e. Tolco, AFCON
 - f. Simpson Strong-Tie
 - g. Powers Fasteners, Inc. or approved equal.

PART 3 EXECUTION

3.01 VIBRATION ISOLATION

- A. Motorized equipment shall be mounted on or suspended with neoprene isolator.

3.02 SEISMIC BRACING GENERAL REQUIREMENTS

- A. Support and bracing from the structure to mechanical equipment shall conform to the plumbing & HVAC industry standard SMACNA "Seismic Restraint Manual, Guidelines for Mechanical Systems" or approved manufacturer's listed seismic assemblies.

3.03 INSTALLATION

- A. Installation of seismic restraints shall be as follows:
1. Upon completion of installation of all seismic restraint materials and before start up of restrained equipment, all debris shall be cleaned from beneath all protected equipment, leaving equipment free to contact snubbers.
 2. All external utility connections to restrained equipment shall be designed to allow differential seismic motion without damage to the equipment or utility connections.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 STANDARDS

- A. ANSI Compliance: Comply with ANSI A13.1 for lettering size, colors, and installed viewing angles of identification devices.

1.03 OPERATION AND MAINTENANCE REQUIREMENTS OF THIS SECTION

- A. Not Applicable

PART 2 PRODUCTS

2.01 APPROVED MANUFACTURERS

- A. Not Applicable

2.02 ENGRAVED PLASTIC-LAMINATE SIGNS

- A. Provide engraved stock phenolic plastic laminate, complying with FS L-P-387, engraved with engraver's standard letter style of sizes and wording, black with white core (letter color) except as otherwise indicated, punched for mechanical fastening except where adhesive mounting is necessary because of substrate.
 - 1. Thickness: 1/16" for units up to 20 sq in or 8" length; 1/8" for larger units.
 - 2. Fasteners: Self-tapping stainless-steel screws, except contact-type permanent adhesive where screws cannot or should not penetrate substrate.
 - 3. Letter Size: No less than 1/2" tall. (Use unit# as noted on the equipment schedules)
- B. Provide for all items on equipment schedules.

PART 3 EXECUTION

3.01 COORDINATION

- A. Where identification is to be applied to surfaces which require insulation, painting or other covering or finish including valve tags in finished mechanical spaces, install identification prior to installation of acoustical ceilings and similar removable concealment.

3.02 MECHANICAL EQUIPMENT IDENTIFICATION

- A. Install engraved plastic laminate sign on or near each unit heater.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section. Work related to this section is described in:
 - 1. Section 20 00 00 - "General Mechanical Requirements"

1.02 SUMMARY

- A. Includes but not limited to: Furnishing and installing specified material as described in the Contract Documents.

1.03 QUALITY ASSURANCE

- A. Units to be UL listed.
- B. Shall conform to NEC and NFPA requirements.

1.04 SUBMITTAL REQUIREMENTS

- A. Electric Heater

1.05 OPERATION AND MAINTENANCE REQUIREMENTS OF THIS SECTION

- A. Not Applicable

PART 2 PRODUCTS

2.01 APPROVED MANUFACTURERS

- A. Not Applicable

2.02 UNIT HEATERS

- A. Furnace shall be factory assembled unit, with blower, heaters, steel casing and completely wired.
- B. Cabinet: 22-gauge minimum cold rolled steel with baked enamel finish. Interior of cabinet around electric heating elements shall be lined with ½ inch thick 1-1/2 lb density fiberglass insulation.
- C. Blower:
 - 1. Propeller type, dynamically and statically balanced.
 - 2. Unit shall be direct drive.
- D. Heaters:
 - 1. High mass, all steel finned and tubular heating element.
 - 2. Each set of heaters shall be equipped with limit control with fixed temperature "OFF" setting and automatic reset with supplemental thermal cut-off safety fuses.
 - 3. Provide fan time delay relay and circuit breakers.
- E. Approved Manufacturers:
 - 1. Indeeco
 - 2. Lennox

3. Markel
4. Trane
5. King
6. Or Approved Equal

PART 3 EXECUTION

3.01 Not Applicable

END OF SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Includes But Limited To: Demolition and maintaining existing systems.
- B. Related Sections: General Conditions, Division 1 and Section 20 00 00 apply to this Section.

1.02 OPERATION AND MAINTENANCE REQUIREMENTS OF THIS SECTION

- A. Not applicable

PART 2 PRODUCTS

2.01 NOT APPLICABLE

PART 3 EXECUTION

3.01 DEMOLITION

- A. The Mechanical Contractor shall be responsible for the removal of all existing Mechanical equipment including, but not limited to piping, fixtures, HVAC equipment, ductwork in areas shown on the drawings and indicated thereon.
- B. Any existing equipment to which modifications are made under this contract shall be painted and labeled in accordance with specifications for new materials.
- C. All Mechanical equipment (other than piping) to be removed shall remain the property of and shall be transported, stored, or disposed as directed by the Owner. This will be at no cost to the Owner.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. By submitting a bid, the Contractor is acknowledging that he has made a thorough examination of the Contract Documents, existing site and building conditions, and has determined that these documents do sufficiently describe the scope of construction work required under this Contract.

1.03 SCOPE OF BASIC BID

- A. Included in Division 26 work is all work and related items necessary to provide all electrical installations except as specifically excluded. In general, this includes all labor, equipment, tools, etc., to complete the electrical work.

1.04 STANDARDS AND REGULATIONS

- A. The work shall comply with the latest edition of the applicable Standards and Codes of the following:

ASTM American Society for Testing and Materials

NBFU National Board of Fire Underwriters

NEC National Electrical Code

____ State Electrical Code

NESC National Electrical Safety Code

NEMA National Electrical Manufacturers Association

NFPA National Fire Protection Association

U.L. Underwriters Laboratories Inc.

IPCEA Insulated Power Cable Engineers Associated

CBM Certified Ballasts Manufacturers

____ Federal, State and Local Building Codes

ETL Electrical Testing Laboratories

- B. If any conflict occurs between Government adopted Code Rules and this specification, the codes are to govern. Nothing in these drawings and specifications shall be construed to permit work not conforming with governing codes. Also, this shall not be construed as relieving the Contractor from complying with any requirements of the plans and specifications which may be in excess of, but not in conflict with, requirements of the Governing Codes.

1.05 PERMITS & FEES

- A. The Contractor shall obtain and pay for all licenses, permits and inspections required by laws, ordinances and rules governing work specified herein. The Contractor shall arrange for inspection of work by the inspectors and shall give the inspectors all necessary assistance in their work of inspection.
- B. The Contractor shall consult with and follow the requirements of the local fire, power, telephone, and television utilities serving the area and shall coordinate his work with them.

1.06 INTENT OF DRAWINGS

- A. The electrical drawings are intended to serve as working drawings for general layout. The equipment layout is diagrammatic and unless specifically dimensioned or detailed, does not indicate all fittings, hardware or appurtenances required for a complete operating installation.
- B. Anything shown on the drawings but not covered in the specifications, or anything covered in the specifications but not shown on the drawings, shall be as if covered in both. In case of conflict between the drawings and specifications, the Engineer will select the method to be used. The Contractor shall be responsible for verifying all measurements before proceeding with the work.
- C. Wiring diagrams are not intended to indicate the exact course of raceways or exact location of outlets. Raceway and outlet locations are approximately correct and are subject to revision as may be necessary or desirable at the time of installation. Precise location in every case shall be subject to the Engineer's approval.

1.07 PROTECTION

- A. The Contractor shall store and guard all equipment before installation and shall protect same, and replace any equipment that has been damaged prior to final acceptance.

1.08 HOUSEKEEPING

- A. All electrical materials shall be kept stored in an orderly fashion protected from heat, cold, and the weather.
- B. All marred surfaces shall be refinished and painted after installation.
- C. All debris shall be removed from premises during work, as directed, and at completion of job.

1.09 TEMPORARY USE

- A. Temporary or interim use of any and all portions of the electrical system shall be under the supervision of the Electrical Contractor.
- B. Temporary power and lighting for use during construction shall be provided per the requirements of the Division 01 specifications.

1.10 WARRANTY

- A. Provide a written warranty that the Division 26 work is free from mechanical and electrical defects. Contractor shall replace and repair, to the satisfaction of the Engineer, any parts of the installation which may fail within a period of 12 months after the certificate of final acceptance provided that such failure is due to defects in material or workmanship, or failure to follow the specifications and drawings.

1.11 COMPLETION OF WORK

- A. Upon completion of the Division 26 work, the Contractor shall deliver to the Engineer a completion letter stating that he has fulfilled all the requirements of his Contract for Division 26 work as set forth in the drawings and specifications and that all items in pre-final inspection lists submitted by the Engineer have been satisfactorily completed.
- B. Arrange for and obtain all required inspections and certificates pertaining to the Division 26 work and deliver the certificates to the Engineer.
- C. Prior to or at the time of final inspection, the Contractor shall, as outlined in detail in the specifications, complete the delivery of all the following items:
 - 1. Completion Letter

- | | | |
|----|--|---|
| 2. | Certificate of Final Inspection, in triplicate form.
Electrical Inspector | COMPLETION OF WORK |
| 3. | Warranty to Port (with copy
Engineer) | SUPPLEMENTARY GENERAL CONDITIONS for
26 00 00 - 1.10 |

PART 2 PRODUCTS

2.01 MATERIALS

- A. All materials must be of the quality herein specified. All materials shall be new, of the best quality and free from defects. They shall be designed to ensure satisfactory operation and operational life in the environmental conditions which will prevail where they are being installed.
- B. Each type of material shall be of the same make and quality. The materials furnished shall be standard products of the manufacturers regularly engaged in the production of such equipment and shall be the manufacturer's latest standard design.
- C. All materials shall be U.L. or E.T.L. listed for the purpose for which they are used.
- D. Equipment in compliance with U.L. standards but not bearing their label is not acceptable. If the manufacturer cannot arrange for labeling of an assembled unit at the factory the unit shall be field evaluated per the Washington State Administrative Code (WAC) and the electrical inspector's requirements.

2.02 COMPLETE SYSTEM

- A. All the systems mentioned shall be complete and operational in every detail except where specifically noted otherwise. Mention of certain materials in these specifications shall not be construed as releasing the Contractor from furnishing such additional materials and performing all labor required to provide a complete and operable system.

2.03 NAMEPLATES

- A. Provide nameplates constructed of plastic (black on white) laminated material engraved through black surface material to white sublayer (attach with screws on NEMA 1 enclosures).
EXCEPTION (1): Emergency distribution system component labeling - white letters on red background. Exception (2): Series rated systems shall be yellow background with white letters.
 - 1. Switch and Receptacle Labels: Refer to Section 26 27 26
 - 2. Motor Starter and Disconnect Labels: Refer to Section 26 28 16

PART 3 EXECUTION

3.01 GENERAL

- A. Careful consideration shall be given to clearances under and over beams, pipes and ducts, to provide proper headroom in all cases. Check drawings to determine heights of all suspended ceilings and size of pipe shafts where raceway and wire-ways shall run. Coordinate installation of Division 26 wiring and equipment with Division 23 and other trades. Where insufficient room for proper installation appears, obtain clarification from Engineer before any installation is begun.
- B. Cutting and Patching:
 - 1. Obtain permission from the Engineer prior to cutting. Locate cuttings so they will not weaken structural components. Cut carefully and only the minimum amount necessary. Cut concrete with diamond core drills except where space limitations prevent the use of such drills.

2. All construction materials damaged or cut into during the installation of this work must be repaired or replaced with materials of like kind and quality as original materials by skilled labor experienced in that particular building trade.

3.02 COORDINATION

- A. The Contractor is responsible for accomplishing Division 26. The work shall coordinate with that of the other Contractors and/or other trades doing work in the building and shall examine all Drawings, including the several Divisions of Mechanical, Structural, Civil and Architectural, for Construction Details and necessary coordination. Specific locations of construction features and equipment shall be obtained from the Contract Documents, field measurements, and/or from the trade providing the material or equipment. No extra costs will be allowed for failure to obtain this information.
- B. All conflicts shall be reported to the Engineer in writing before installation for decision and correction. Special attention is called to the following items:
 1. Door swings to the end that switches will be located on "Strike" side of the door.
 2. Location of grilles, pipes, sprinkler heads, ducts and other mechanical equipment so that all electrical outlets, lighting fixtures and other electrical outlets and equipment are clear from and in proper relation to these items.
 3. Location of cabinets, counters, and doors so that electrical outlets, lighting fixtures and equipment are clear from and in proper relation to these items.
 4. Type and height of ceiling.
 5. All device measurements referenced on drawings or specifications are to be centered of device unless noted otherwise.
- C. The Contractor will not be paid for work requiring reinstallation due to lack of coordination or interference with other Contractors or trades. This includes, but is not limited to, removing, replacing, relocating, cutting, patching, and finishing.
- D. Device and fixture locations may be changed within 15 feet without extra charge if so desired by the Engineer, before installation.

3.03 CLEANING AND PAINTING

- A. All equipment, whether exposed to the weather or stored indoors shall be covered to protect it from water, dust and dirt.
- B. After installing, all metal finishes shall be cleaned and polished, cleaned of all dirt, rust, cement, plaster, grease and paint.
- C. All equipment with a primer coat of paint shall be given two (2) or more coats of a finish enamel and scratched surfaces be refinished to look like new. Markings, identification and nameplates shall be replaced.

3.04 EQUIPMENT IDENTIFICATION

- A. Provide identifying engraved bakelite nameplate on all equipment, including pull boxes, to clearly indicate its use, area served, circuit identification, voltage, and any other useful data.
- B. Each auxiliary system, including communications, shall be clearly labeled to indicate its function.

3.05 DEVIATION

- A. Deviation from the shop drawings in construction or installation of equipment shall not be made unless Shop Drawings showing proposed deviations are submitted to and approved by the Engineer. If any equipment is furnished under this or other divisions with current, voltage or phase ratings that differ from those shown on the drawings, the Contractor shall notify the Engineer in writing immediately and shall not connect said equipment until instructed as to required changes by the Engineer. No extension of time will be granted as a result of such changes.

3.06 EXCAVATIONS

- A. All excavations are to be so conducted so that no walls or footings shall be disturbed in any way.
- B. Remove all surplus earth not needed for backfilling and dispose of same as directed.

3.07 WIRING METHODS

- A. All low voltage wiring shall be in Raceway with Junction Boxes and Fittings where concealed in walls, in inaccessible ceiling space, or where exposed in finished or unfinished areas.
- B. All branch circuit wiring shall be installed in raceway with junction boxes and fittings.
- C. Provide access panels as needed for pull boxes and equipment located above ceiling or behind walls.
- D. Any low voltage cables that are not terminated at both ends shall be tagged and labeled per code.

3.08 PENETRATIONS OF FIRE RATED ELEMENTS

- A. Must be made such as to retain that rating.

3.09 HANGERS AND SUPPORTS

- A. Provide hangers, brackets, and suspension rods and supplementary steel to support equipment.
- B. Hangers provided under other divisions shall not be used for support of Division 26 equipment unless permitted by the Engineer.

3.10 CHASES AND OPENINGS

- A. Provide to the masonry and concrete trades all templates and details of chases, openings in floors and walls as required for Division 26 equipment installation.

3.11 WORKMANSHIP AND OBSERVATION

- A. Workmanship shall be of the best quality and none but competent workers shall be employed under the supervision of a competent foreman. All completed work shall represent a neat and workmanship like appearance.
- B. All work and materials shall be subject to observation at any and all times by the Engineer.

3.12 MISCELLANEOUS

- A. Provide complete seismic anchorage and bracing for the lateral and vertical support of conduit and electrical equipment, as required by the International Building Code.

- B. Conduits that cross seismic separations shall be installed with flexible connection suitable to accommodate conditions. Secure raceways on each side of a separation and provide a minimum of 36" length of flexible conduit to span separation.

3.13 CABLE AND WIRING ROUTED UNDERGROUND OR UNDERSLAB

- A. All cables and conductors, both line voltage and low voltage, routed underground or underslab shall be U.L. listed for installation in wet locations per NEC and WAC codes.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Provide all wire, cable, and terminations complete.

1.03 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. All wire types and cables.
- B. Splices
- C. Terminations
- D. Plastic Cable Ties

PART 2 PRODUCTS

2.01 WIRE AND CABLE (COPPER, 600-VOLT)

- A. Interior and Above Grade: All wires to be Type THWN/THHN. Wire and cables shall be brought to project in original containers bearing the underwriters label.

2.02 SPLICES

- A. Above Grade: Solderless type only. Preinsulated "twist-on" type (limited to size #10 and smaller). Bolt on compression type with application of preformed insulated cover, heat shrinkable tubing or plastic insulated tape acceptable for all sizes.

2.03 TERMINATIONS

- A. Compression set, bolted or screw terminal.
- B. Conductors #12 and smaller shall utilize eye or forked tongue type compression set terminator utilizing ratchet type compression style when termination is to a bolted or screw set type terminal block or terminal cabinet.

2.04 PLASTIC CABLE TIES

- A. Nylon or Equivalent, locking type.

PART 3 EXECUTION

3.01 GENERAL

- A. Install all wiring in Raceway unless shown or specifically authorized otherwise.

3.02 WIRE SIZE

- A. No. 12 AWG minimum for power and lighting circuits.
- B. Provide solid wire for No. 10 AWG and smaller, and stranded conductors for No. 8 AWG and larger (600) volts.

3.03 TESTS

- A. In addition to the factory testing of all equipment and cable, the Contractor shall test all wiring connections for continuity and ground before any fixtures or other loads are connected. Tests shall be made with a 500V minimum DC "Megger" type tester. If tests indicate faulty insulation

(less than 2 megohms), such defects shall be corrected and tested again. Contractor shall provide all apparatus to make tests and shall bear all expenses of required testing. Routine operation tests shall be made on all pieces of equipment to demonstrate that working parts are in operating condition. Results of all tests shall be recorded and submitted to the Engineer. The Contractor shall immediately replace all parts, which fail to pass the test.

- B. Measure the OHMIC value of the Electric Service Entrance metallic "System Ground" with reference to "Earth Ground" using the "Multiple Ground Rod Fall-In-Potential" method and suitable instruments. Maximum resistance to ground shall be less than 10 ohms. If this resistance cannot be obtained with the ground system shown, notify the Engineer immediately for further instructions. Provide OHMIC test results to Engineer.
- C. All circuits both in and out of the building shall test out free of grounds, short circuits and other defects.
- D. Check and record catalog number and ampere size of controller overload heaters installed, nameplate full-load amperes, and actual operating amperes of each motor. **IMPORTANT:** Submit recorded data in triplicate to the Engineer. Check proper load balance on the electrical system, direction of rotation, lubrication, and overload protection of all motors before placing in operation.
- E. Provide a log of ampere reading for all panels from phase to neutral for 4 wire panels and from phase to phase for 3 wire panels. These readings shall be taken with all loads activated.
- F. The final test of all equipment shall be made on dates designated by the Engineer and all readings shall be made in his presence.
- G. Feeders shall be checked to ensure all phases are energized before connecting to their respective motors. Each motor shall rotate in the proper direction for its respective load. Prior to rotation test, all bearings shall be inspected for proper lubrication.
- H. Minimum megger test for equipment shall be as follows:

1. Equipment Maximum	Minimum Test
2. Voltage Rating	Resistance
3. _____	
4. 1,000-Volts or less	2 Megohms
- I. Provide certification of torque values for feeder and service entrance conductors per equipment manufacturer's recommendation.

3.04 CONDUCTOR SIZES, REFERENCED ON PLANS

- A. Copper, type THWN/THHN unless noted.

3.05 PULLING

- A. Use no mechanical means for pulling No. 8 AWG conductors and smaller. Powdered soap stone or approved spray cream shall be the only lubricant used.

3.06 STRIPPING INSULATION

- A. Do not ring the cable, always pare or pencil.

3.07 TAPING

- A. If used shall be half lapped synthetic tape.

3.08 CONDUCTORS IN PANELS AND SWITCHBOARDS

- A. Conductors in panels, switchboards, and terminal cabinets shall be neatly grouped and formed in a manner to "Fan" into terminals with regular spacing.

3.09 CABLE SUPPORTS

- A. Provide conductor support devices as required by code in vertical cable runs.

3.10 RACEWAY SIZES REFERENCED ON DRAWINGS

- A. Raceways are sized for copper, type THW, unless otherwise noted. Size all Raceways per code unless specifically noted to be larger on the drawings.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. A grounding system shall be provided for neutral ground and equipment ground as required by code.
- B. An isolated grounding system shall be provided for all isolated ground receptacles as allowed by Code (2011 NEC 250-146, paragraph D).

1.03 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. Grounding Conductors

PART 2 PRODUCTS

2.01 GROUNDING CONDUCTORS

- A. Copper, code size, with physical protection where subject to damage. Bare or green insulated.

PART 3 EXECUTION

3.01 GENERAL

- A. Provide all grounding for electrical systems and equipment as required by codes and as specified herein.

3.02 SIZE OF GROUND WIRE

- A. As required by code. Where ground wire is exposed to physical damage or is used outside of building, protect with conduit.

3.03 GROUND CONNECTION OF WATER PIPING

- A. Metal internal piping shall be grounded, as part of this Contract. This includes jumpers for dielectric fittings.

3.04 GROUND CONNECTION OF BUILDING STEEL

- A. Structural metal shall be grounded, as part of this Contract.

3.05 CONNECTION TO THE GROUND BUS

- A. Provide connections in accordance with the codes; including but not limited to raceway systems, switchboard/panelboard frames, service neutral, separately derived systems, electrically operated equipment and devices. No device or equipment shall be connected for electrical service which has a neutral conductor connected to a grounding conductor or to the frame within the device or equipment.

3.06 METHOD OF CONNECTION

- A. Make all ground connections and ground cable splices by thermal welding. Grounding lugs, where provided as standard Manufacturer's items on equipment furnished, may be used.

3.07 FLEXIBLE RACEWAY

- A. Shall not be used for grounding. Install separate ground conductor in all flexible raceway.

3.08 PVC RACEWAY

- A. Install separate ground conductor in all PVC raceway as required per code.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Provide outlet and pull boxes to enclose devices, permit the pulling of conductors and for wire splices and branches.

1.03 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. Outlet and Pull boxes
- B. Concrete and Masonry boxes
- C. Ceiling outlet boxes

PART 2 PRODUCTS

2.01 INTERIOR WIRING

- A. General: Outlet and pull boxes shall be pressed drawn steel, zinc coated with plaster ring where applicable. Welded boxes not allowed. Four-inch size minimum. Large pull boxes shall be fabricated sheet steel, zinc coated or baked enamel finish, with return flange and screw retained cover.
- B. Surface Metal Raceway: Boxes of same Manufacture and to match Raceway. Boxes to accommodate standard devices and device plate.
- C. Concrete and Masonry: Boxes for casting in concrete or mounting in masonry walls shall be the type specifically designed for that purpose.
- D. Install pull boxes so as to be accessible after completion of building construction.
- E. Ceiling outlet boxes shall be galvanized octagonal 4 inch, 1-1/2 inch deep (without fixture stud), 2-1/8 inches deep (with fixture stud).

PART 3 EXECUTION

3.01 ANCHORING

- A. All boxes shall be firmly anchored directly or with concealed bracing to building studs or joints. Boxes must be so attached so that they will not "Rock" or "Shift" when devices are operated.

3.02 FLUSH MOUNTING

- A. Except for surface mounted boxes or boxes above accessible ceilings, all boxes shall have front edge (box or plaster ring) even with the finished surface of the wall or ceiling.

3.03 ELECTRICAL OUTLETS

- A. General: Coordinate the work of this section with the work of other sections and trades. Study all Drawings that form a part of this Contract and confer with various trades involved to eliminate conflicts between the work of this section and the work of other trades. Check and verify outlet locations indicated on Architectural Drawings, door swings, installation details, layouts of suspended ceilings and locations of all plumbing, heating and ventilating equipment.

- B. Centered on Built-In Work: In the case of doors, cabinets, recessed or similar features, or where outlets are centered between such features, such as between a door jamb and a cabinet, make these outlet locations exact. Relocate any outlets which are located off center.
- C. Vertical and Horizontal Relationships: Where more than one outlet is shown or specified to be at the same elevation or one above the other, align them exactly on centerlines horizontally or vertically. Relocate as directed all such outlets (including lighting, receptacle, power signal and thermostat outlets) which are not so installed, at no additional cost to Port.
- D. Device Outlet Height: Measure from the finished floor.
 - 1. *Switches 4 Feet, Set Vertically, to Top of Box
 - 2. *Receptacles, Telecommunications 18 Inches, Set Vertically to Centerline
 - 3. Other As Noted or as Directed by Engineer

**Heights may vary. See Drawings for additional information*
- E. Ceiling Location: For acoustical material locate outlet either at the corner joint or in the center of a panel, whichever is closer to the normal spacing. Locate all outlets in the same room in the same panel location.
- F. Installed In Sound Walls: Boxes installed in sound walls shall not be installed back to back. All boxes shall be separated by one stud space and shall be interconnected with flex conduit with a 90° loop.

3.04 ELECTRICAL WORK IN COUNTERBACKS, MILLWORK AND CASEWORK

- A. Provide as shown and/or specified. Provide templates, where required, to other trades for drilling and cutting to insure accurate location of electrical fixtures (outlets and devices) as verified with the Engineer. Provide all wiring, devices, plates and connections required by said fixture.

3.05 CONNECTION TO EQUIPMENT

- A. For equipment furnished under this or other Divisions of the Specifications, or by others. Provide outlet boxes of sizes and at locations necessary to serve such equipment. An outlet box is required if the equipment has pigtail wires for external connection, does not have space to accommodate circuit wiring used. Study equipment details to assure proper coordination.

3.06 BLANK COVERS

- A. Provide blank covers or plates over all boxes not covered by equipment.

3.07 JUNCTION OR PULL BOXES

- A. Pull and junction boxes shall be installed as shown, and to facilitate pulling of wire and to limit the number of bends within code requirements. Boxes shall be permanently accessible and shall be placed only at locations approved by the Engineer.
- B. In suspended ceiling spaces, boxes shall be supported from the structure independently from ceiling suspension system.
- C. The Drawings do not necessarily show every pull or Junction Box required. The Contractor is permitted to provide boxes deemed necessary by him for his work when installed in accordance with these Specifications.

3.08 BOXES CONTAINING MULTIPLE DEVICES

- A. Boxes containing emergency and normal devices are permitted only with steel barriers Manufactured especially for the purpose of dividing the box into two completely separate compartments.
- B. Device Boxes Containing Multiple Devices and Wiring Rated Over 150 Volts to Ground and Over 300 Volts Between Conductors are permitted only with steel barrier manufactured especially for the purpose of dividing the box into separate compartments for each device having exposed live parts.

3.09 BOXES IN EARTH

- A. Provide for all wire splices and as required to pull conductors. Boxes (handholes) shall be set in place on a 3" sand bed. Coverplates shall be flush to, and match the slope of, the final surface grade.

3.10 NAMEPLATES

- A. For all line voltage junction boxes, provide engraved nameplate indicating circuit numbering of all wiring in junction box.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Provide Raceway System complete.

1.03 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. All proposed conduit type to be utilize for this project.
- B. Flexible Metal Conduit

PART 2 PRODUCTS

2.01 GALVANIZED RIGID STEEL CONDUIT (GRS)

- A. General: Hot dipped galvanized.
- B. Fittings: Galvanized malleable iron or noncorrosive alloy compatible with galvanized conduit. Erickson couplings, watertight split couplings (O.Z. type or equivalent) permitted. Running thread or set screw type fittings not approved.

2.02 INTERMEDIATE METAL CONDUIT (IMC)

- A. General: Hot Dipped galvanized.
- B. Fittings: Galvanized malleable iron or noncorrosive alloy compatible with galvanized conduit. Erickson couplings, watertight split couplings (O.Z. type or equivalent) permitted. Running thread or set screw type fittings not approved.

2.03 ELECTRICAL METALLIC TUBING (EMT)

- A. General: Hot dipped galvanized.
- B. Fittings: Raintight; steel or malleable iron type using a split corrugated compression ring and tightening nut or stainless-steel locking disc. Steel set screw fittings are acceptable for dry locations. Indenter, drive-on and pressure cast or die cast type set screw are not acceptable.

2.04 FLEXIBLE METAL CONDUIT (FMC, LFMC)

- A. Dry Locations:
 - 1. General: Galvanized flexible steel for dry locations only.
 - 2. Fittings: Malleable iron or steel, Thomas and Betts "squeeze" type or equal.
- B. Damp and Wet Locations:
 - 1. Liquid Tight: Polyvinyl chloride (PVC) weatherproof cover over flexible steel conduit.
 - 2. Fittings: Thomas and Betts "liquid tight" or equal.

2.05 SURFACE METAL RACEWAY

- A. Formed steel or aluminum type. Standard factory finish. Where color choice is available, consult Engineer for selection prior to ordering.

2.06 RIGID ALUMINUM CONDUIT

- A. Permitted only in specified locations.

- B. Fittings copper free cast aluminum.

PART 3 EXECUTION

3.01 GENERAL

- A. Install Raceway concealed in construction unless noted otherwise on the Drawings or specifically approved in writing by the Engineer.
- B. Cut Raceway ends square, ream and extend maximum distance into all couplings and connectors.
- C. Provide and install manufactured end caps on all Raceway ends during construction to prevent the entrance of water or dirt. Tape, as a cover, not permitted.
- D. Swab out all Raceways before pulling wires.
- E. All elbows for GRS and PVC Raceway shall be factory radius bends. For all other Raceway, use factory radius bends of 1-1/4" and larger diameter.
- F. Raceway shall not penetrate sheet metal ducts unless permission is granted by Engineer. All sleeves shall be provided for Raceway installation.
- G. Provide 2 - 3/4" C.O. stub into accessible ceiling space from all recessed panelboards or systems terminal boxes.

3.02 GALVANIZED RIGID STEEL CONDUIT

- A. All Connections shall be watertight. Install for all Raceways in concrete or where subject to damage.

3.03 INTERMEDIATE METAL CONDUIT

- A. Intermediate metal conduit is permitted as a substitute for galvanized rigid steel conduit except where GRS is required by code.

3.04 ELECTRICAL METALLIC TUBING

- A. Install for wiring in masonry, frame construction, furred ceilings and above suspended ceilings. May be used for exposed work in unfinished areas where not subject to damage. Where construction involves masonry work, surface cut masonry units wherever such masonry units are to remain unplastered or uncovered in complete construction.

3.05 RIGID ALUMINUM CONDUIT

- A. May be used in lieu of galvanized rigid steel conduit where Raceway is run above grade or inside of buildings; rigid aluminum conduit not permitted where Raceways are encased in or attached to concrete or are below grade.

3.06 INSERTS, SHIELDS AND SLEEVES

- A. Furnish and set in place, in advance of pouring slabs and walls, all inserts and sleeves needed to execute Division 26 equipment installation.
- B. Where supports in slabs are required after wall has been poured, use a drilled-in threaded insert, installed as recommended by Manufacturer.
- C. Sleeves shall be provided for all wall penetrations.

3.07 SEALING OF RACEWAY PENETRATIONS

- A. Exterior Wall Surfaces Above Grade: Seal around all penetrations with caulking approved by Engineer. For concrete construction above ground level, cast Raceway in wall or core drill wall and hard pack with a mixture of equal parts of sand and cement.
- B. Exterior Surfaces Below Grade: Cast Raceway into wall (or floor) or use manufactured seal assembly (such as O.Z. type "FSK") cast in place.
- C. Roofs: Provide mopped, lead, roof jack where Raceway penetrates roof membrane.
- D. Fire Rated Floors, Walls, Ceiling/Roofs: Concrete or masonry, seal around Raceway penetration with Dow Corning 3-6548 silicone RTV foam or approved equal. Plaster or gypsum wallboard, seal around Raceway penetration with plaster, fire tape per local Fire Marshal's requirements.

3.08 SEALING OF RACEWAYS

- A. Seal interior of all Raceways which pass through buildings roofs, floors or through outside walls of the building, above or below grade. Seal on the end inside the building using duct sealing mastic, non-hardening compound type, specially designed for such service to maintain the integrity of the seal of the wall, floor or roof. Pack around the wires in the Raceways.

3.09 HANGARS FOR RACEWAYS

- A. In suspended ceiling spaces Contractor may, at his option, attach 1/2" or 3/4" EMT Raceways to the ceiling suspension system where such system is structurally suitable on independent wire secured at both ends; in which case, provide clips manufactured for the purpose.
- B. When more than two Raceways will use the same routing, group together on a patented channel support system (such as Unistrut).

3.10 SURFACE METAL RACEWAY

- A. Install parallel to building surface (i.e., wall, ceiling, floor). Fasten to surface as recommended by Manufacturer. Mount so Raceway is in the least obvious location. Shall be used in lieu of conduit in finished areas.

3.11 FLEXIBLE CONDUIT

- A. Flexible conduit shall be used only for connection to motors and equipment subject to vibration with 90 degrees loop minimum to allow for isolation and for lay-in LED fixtures above T-Bar ceilings. For fixture installations, one end of flex must terminate in rough-in junction box. Flex conduit shall not be installed over 6' long or used to connect from fixture to fixture. Use liquid tight for pumps, equipment which is regularly washed down, and equipment in damp locations. Provide ground wire.

3.12 PULL CORDS

- A. Nylon type shall be included in all installed empty Raceway.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Provide all panelboard equipment, complete; dead front type.

1.03 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. Panelboard
- B. Circuit Breakers
- C. Panel Schedules

PART 2 PRODUCTS

2.01 PANELBOARD TYPE

- A. Panelboards shall be rated at proper voltage and current for intended use with busbars of copper or aluminum. Panels shall be 3-phase, 4-wire, 100% neutral, unless noted otherwise. Where aluminum is utilized, all lugs shall be of an approved compression type. Provide multiple lugs where conductors in parallel or "feed through" are shown on the Drawings.
- B. Conductor Connectors shall be bolted to busbars using Grade 5 bolts and Belleville washers. Feeder conductor connectors shall be rated for 75 Degree C. wire when 75 Degree C. wire is indicated. Where aluminum conductors are utilized for feeders or branch circuits the connectors shall conform with Section 26 05 19.
- C. Panelboards shall have a separate ground bus bonded to the panelboard frame.
- D. Where 120-Volt, 15- or 20-Amp breakers are intended for switching loads they shall be of type rated for switching duty labeled "SWD."

2.02 ACCEPTABLE MANUFACTURERS

- A. General Electric
- B. Square-D
- C. Siemens
- D. Cutler-Hammer

2.03 CIRCUIT BREAKERS

- A. The following interrupting capacity, 10,000 AIC Symmetrical shall be considered minimum. Other ratings shall be as specified on panel schedules shown on the Drawings. Series rating of breakers is not allowed.
- B. Mount breakers in all panelboards so that breaker handles operate in a horizontal plane. Bolt in type only. Provide common trip on all multiple pole breakers.
- C. Where noted, provide spare breakers, complete for future connection of wiring circuits. Where "Space" is indicated for breakers, provide all bussing and breaker mounting hardware in the panelboard, provide steel knockouts in dead front metal closure of unused part of panel. If any steel knockouts are removed, provide breakers in such spaces or approved coverplates. Open spaces are not permitted.

- D. For multi-wire branch circuits, provide approved breaker handle ties where required by NEC 210.4.
- E. An Arc-fault circuit interrupter shall be provided for all receptacles, lighting fixtures, and smoke detector in bedrooms/living units.

2.04 CABINET FOR EACH PANELBOARD

- A. Flush or surface, as indicated; tight closing doors without play, when latched. Where two cabinets are located adjacent to each other in finished areas, provide matching trim of the same height. Where a remote controlled switch or contactor is mounted in any panelboard, mount on same frame as panelboard interior with screw retained access door in dead front shield; common door over circuit breakers and remote controlled device. Where flush mounted, provide (2) 3/4" conduits to accessible ceiling space for future expansion.
- B. All conduits for future expansion shall stub into a junction box, where located above grade, and shall be sealed in the panel.
- C. Provide cabinets of sufficient dimensions to allow for future expansion and addition of circuit breakers within the panelboards as indicated on panel schedules.
- D. Provide cabinet front with full-height hinged door. One door over the interior and an additional hinged dead front cover over interior and wireway (door-in-door). Full-height front cover hinged to box with concealed trim clamps. Provide flush door locks.
- E. Provide lock for each cabinet door. All Electrical Distribution Equipment Locks shall be keyed identically. Key system shall match existing. Supply the Port with minimum six keys.
- F. Fasten panelboard front with machine screws with oval counter-sunk heads, finish hardware quality, with escutcheons or approved trim clamps. Clamps accessible only when dead front door is open are acceptable. Surface mounted panelboards with fronts greater than 48 inches vertical dimension shall be hinged at right side in addition to hinged door over dead front.
- G. Finish: Provide factory prime coat for cabinets to be located in finished areas. Where cabinets are located in unfinished areas, standard lacquer or enamel finish, gray or blue-gray color, shall be substituted for factory prime coat.

2.05 SYSTEM OF NUMBERING AND BUS ARRANGEMENT

- A. Shall be as shown on the Panel Schedules on the Drawings.

2.06 PANELBOARD NAMEPLATE

- A. Provide engraved and filled (or color layer - engraved through outer layer) plastic nameplate with 1/2-inch high characters (for panel name); attached with screws to each NEMA 1 panelboard front. White on black, include voltage, phases, wires and minimum A.I.C. Rating in 3/8-inch characters.
- B. Nameplate color shall be:
 - 1. Normal System: White letters on black
- C. Provide a service entrance label nameplate on the main panelboard which includes the following:
 - 1. Architect
 - 2. Electrical Consultant
 - 3. Electrical Contractor

4. Date of Installation
 5. Service Voltage & Bus Amperage Rating
 6. Symmetrical Short Circuit Current Rating
 7. Year of Manufacture
- D. Provide a riser diagram drawing using non-fading ink and mylar installed under glass and attached to the exterior of the main panelboard showing feeder runs, panels, transformers and raceway sizes.

PART 3 EXECUTION

3.01 MOUNTING

- A. Secure in place with top of cabinet at 6'-0", unless otherwise noted. Top of cabinet and trim shall be level. Firmly anchor cabinets directly or with concealed bracing to Building Structure. When panels are not located in or directly on a wall, provide a support frame of formed steel channel which is anchored to the floor and Ceiling Structure. Interiors shall not be installed until Structure is totally enclosed. Where panels are mounted adjacent to each other, the top edges shall be at the same height.

3.02 CIRCUIT INDEX

- A. For each branch circuit panelboard provide a typewritten index listing each circuit in the panelboard by number with its proper load designation. Mount with a transparent protective cover inside cabinet door. Listing shall match circuit breaker arrangements, typically with odd numbers on the left and even numbers on the right. Room numbers used shall be final room numbers used in the building as verified with the Port, and not room number assigned on Plans.

3.03 CABINET PAINTING

- A. Cabinets furnished as prime painting shall be field painted to match color of adjacent wall.

3.04 SPACE

- A. Verify space available with equipment sizes and Code Required Working Clearances prior to Submittal of Shop Drawings.

3.05 GROUNDING

- A. Provide separate ground busbar for all panels supplying isolated ground circuits.

3.06 FEED THROUGH AND DOUBLE LUGS

- A. Provide feed through or double lugs with amperage equal to the incoming feeder amperage unless shown as larger.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Work under this section includes all requirements for motor controls to be furnished under the electrical portion of the work on all electrical motor driven equipment. Individually mounted starters shall be provided by the new Contractor. Motor controls shall conform to NEMA Standards for each specific purpose.
- B. The new Contractor shall furnish all motor controllers not included with equipment furnished under other divisions of these specifications or by Engineer. The new Contractor shall install all motor controllers including all controllers not factory assembled into equipment furnished under other divisions of these specifications or by Engineer.

1.03 MOTOR VOLTAGE INFORMATION

- A. Voltages available are 480 Volt, 3 phase or 208 Volt, 3 Phase, and 115 Volt Single Phase.
- B. Circuits are designed (in general) for motors as follows:
- C. Smaller than 1/2 H.P. - 115 Volts, Single Phase 1/2 H.P. and larger - 460 or 200 Volts, 3 Phase
- D. Verify motor sizes and voltages provided under other divisions and notify General Contractor immediately if any discrepancies are noted.

1.04 REGULATORY REQUIREMENTS

- A. Provide motor protection switches of the appropriate NEMA size. For units not using NEMA rating, use equivalent NEMA size.

1.05 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. Motor Starters
- B. Fan Shutdown Relays

PART 2 PRODUCTS

2.01 MOTOR STARTERS

- A. Magnetic Motor Starters: Unless noted otherwise, shall be full voltage non-reversing with three overloads sized to suit nameplate amperes of motor served, motor "On" and "Off" pilot lights, "Hands-Off-Auto" switch, and auxiliary contacts for interlocking.
- B. Combination Motor Starter/Disconnect: Shall be fused switch type with all features of Paragraph A above. In addition, provide disconnect switch auxiliary contacts for disconnection of externally powered control circuits where applicable. Fuses shall be sized in accordance with motor manufacturer's requirements.
- C. Manual Starters: Shall be toggle switch or push-button type, lockable in the "Off" position, with overload relays, pilot light and enclosure pursuant to Paragraph D below. Manual starters shall only be used where specifically shown or called out on the drawings and only for single phase, fractional horsepower motors.

- D. Enclosures: All motor controllers shall be contained in an enclosure suitable for the environment in which the controller is mounted, and shall be weatherproof when exposed to weather.
- E. Overload Devices: Shall be melting alloy or bimetallic type. One overload shall be provided for each phase. Provisions shall be made for resetting the overload devices from outside the starter enclosure. Provide ambient compensated overload devices only when the motor is at a constant temperature and the controller is subject to a separate, varying temperature. Automatic reset overload devices are not permitted.

2.02 ACCEPTABLE MANUFACTURERS

- A. Square D
- B. Allen Bradley
- C. General Electric
- D. Cutler-Hammer
- E. Siemens

2.03 NAMEPLATES

- A. Pursuant to Section 26 00 00, Paragraph 2.03, provide nameplates permanently attach (with screws on NEMA 1 enclosures) on each controller, nameplates with the following information: Load served, voltage, phase, short circuit rating, panel/circuit number and where applicable fuse size and type.

2.04 POWER FACTOR CORRECTION

- A. Provide power factor correction capacitors for all motors 25 horsepower and above. Capacitor size when indicated on the drawings is an approximation only. Final size shall be determined by the Contractor based on the recommendations of the motor manufacturer to bring the power factor to between 0.9 and 0.95. All capacitors are to be fused, with blown fuse indicators mounted on the front of the unit. Provide discharge resistors when required by code.

PART 3 EXECUTION

3.01 FINISHED AREAS

- A. In finished areas, mount motor protection switches flush and install suitable coverplates.

3.02 HEATERS

- A. Install heaters co-related with full-load current of motors provided.

3.03 OVERLOADS

- A. Set overload devices to suit motors provided.

3.04 SUPPORTS

- A. Securely mount to equipment, wall or acceptable mounting frame.

3.05 FAN SHUTDOWN WIRING

- A. Provide wiring interlock connections for all (over 2000 cfm) fan starter control circuits via Division 23 furnished fan shutdown relay to shutdown fans upon receipt of Fire Alarm.

3.06 FAN SHUTDOWN WIRING

- A. Provide wiring interlock connections for all (over 2000 cfm) fan starter control circuits via to shutdown fans upon receipt of Fire Alarm.

3.07 CONNECTION TO MECHANICAL EQUIPMENT ON ROOFS

- A. The Contractor shall coordinate all roofing penetrations with the general contractor and roofing contractor to assure that the roofing warranty is maintained.
- B. Attachment of conduits to the roof to serve mechanical equipment and devices shall comply with Section 26 05 33.

3.08 MECHANICAL EQUIPMENT NAMEPLATE RATINGS

- A. The Contractor shall verify that the nameplate ratings of the mechanical equipment, when they arrive on site, are consistent with the ampacity called out on the drawings. The Contractor shall bring any discrepancies to the Engineers attention prior to installation of conduit and wiring.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Provide all wiring devices and plates.
- B. No push-in terminals allowed.
- C. All devices color shall be ivory, unless otherwise noted.

1.03 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. Switches
- B. Receptacles
- C. Device Plates
- D. Occupancy Sensors

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Hubbell
- B. Pass & Seymour
- C. Leviton
- D. Cooper
- E. Or Approved Equal

2.02 SWITCHES

- A. "Industrial Specification Grade", quiet type, rated 277 volt, 20 amp, unless noted, with plastic handle. Single pole, double pole, 3-way, or locking type as required. Meets Fed. Spec. WS-896 Provide matching styles and colors in other devices as required for the conditions of installation. Hubbell CS1221, Cooper CSB120, Leviton 1221, and P&S 20AC1
- B. Interchangeable type shall be rated same as above.
- C. Momentary Contact Line Voltage Switches: Single pole, double throw, 3-wire, normally open. Rating same as above.
- D. Key Operated: Hubbell HBL1221L (or equal) with 1209 Key. Provide 24 spare Keys.
- E. Motor rated switches: Switches serving as motor disconnecting means shall be horsepower rated with overload relays and meet requirements as stated above. See manual starters in Section 26 24 19, 'Motor Controllers'.
- F. Device plates shall be Hubbell and Cooper Type 302 stainless steel.

2.03 RECEPTACLES

- A. "Industrial Specification Grade", Duplex NEMA 5-20R configuration (20-Amp, 120-Volt) unless shown otherwise. Must have "rivetless ground" contact manufactured as an integral component of the external ground screw terminal. Meets Fed Spec. WC-596 Hubbell HBL5362, Cooper 5362, P&S 5362A, and Leviton 5362.
- B. Ground-Fault Circuit-Interrupter Duplex Receptacles: NEMA 5-20R. Hubbell GF20ILA, and Cooper VGF20, for 20 Amp, 125-Volt AC. Provide GFI receptacles where required by code.
- C. Duplex NEMA 5-20R configuration, isolated ground, orange color. Leviton 5362 IG, and Cooper IG5362.
- D. Weather Resistant (WR) / Ground Fault Circuit-Interrupter (GFCI) Outdoor Duplex Receptacles: NEMA 5-20R. Hubbell GFTR201 or equal, for 20 Amp, 125-Volt AC.
- E. Special Purpose Receptacles: For special purpose receptacles, see drawings for voltage, amperage, and phase. Provide with matching plug delivered to the Port.

2.04 DEVICE PLATES

- A. Interior: Plates for receptacles other than NEMA 5-20R shall have ampere rating, voltage and phase engraved in the plate. Plates for recessed boxes shall be Hubbell and Cooper Type 302 stainless steel. Attachment screws shall match finish of plate. Plates for surface mounted boxes shall be of pressed stainless steel with size to fit exactly the box used.
- B. Exterior: Intermatic # WP1010MC, for vertical mount and # WP1010HMC for horizontal mount, or equivalent for receptacles. Metal cover shall be raintight while-in-use.

2.05 MULTIOUTLET ASSEMBLY (WHEN SHOWN)

- A. Provide assemblies complete, including necessary fittings and hardware with circuits as indicated on Plans and outlet spacing as indicated. All assemblies shall contain ground wire. Wiremold or equal.

2.06 OCCUPANCY SENSORS

- A. Provide self-adjusting occupancy sensor light switching devices for control of lighting in all rooms and offices shown on drawings.
- B. Ceiling mounted dual-technology Occupancy sensor shall be Wattstopper model DT-300 or equal; complete with power pack and associated mounting hardware.
- C. Ceiling mounted dual-technology Vacancy sensor shall be Wattstopper model DT-300 or equal; complete with power pack and associated mounting hardware. Provide compatible, normally open, momentary switch, Wattstopper model RH-253 for vacancy sensor wall switch.
- D. Combination switch/dual-technology occupancy shall be Wattstopper model DW-100. Set relay to "Occupancy Sensor On Mode" for vacancy sensor switch function as indicated on the drawings.
- E. Combination switch/dual-technology vacancy sensor shall be Wattstopper model DW100. Set relay to "Manual On Mode" for vacancy sensor switch function as indicated on the drawings.
- F. Sensors shall be ceiling or wall mounted to provide adequate coverage.

PART 3 EXECUTION

3.01 MOUNTING

- A. Rigidly fasten each device to the outlet box at proper position with the wall to bring receptacle flush with plate or switch handle the proper distance through the plate.

3.02 ORIENTATION

- A. Set Switches vertical with handle operating vertically, up position "ON".
- B. Set Receptacles vertical with ground slot down.

3.03 DEVICE PLATES

- A. Shall be stainless steel for each new wiring device and for each telephone and signal equipment outlet, except where equipment mounted thereon covers the outlet box completely.
- B. Provide new covers on existing outlet boxes being reused.

3.04 RECEPTACLE GROUNDING

- A. Provide bare bonding wire between receptacle grounding terminal and box. Plaster ear screws connecting frame to the box will not be acceptable for grounding.
- B. Provide green insulated grounding conductor in all branch circuits supplying isolated ground and ground-fault circuit-interrupter type receptacles.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Provide all fuses as required. Provide three (3) spare of each size and type required. Fuses shall not be installed until equipment is ready to be energized. This measure prevents fuse damage during shipment of the equipment from the manufacturer to the jobsite or from water that may contact the fuse before the equipment is installed. Final tests and inspections shall be made prior to energization of the equipment. This shall include a thorough cleaning, tightening, and review of all electrical connections and inspection of all grounding conductors. All fuses shall be furnished by the Electrical Contractor. All fuses shall be of the same manufacturer.

1.03 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. Fuses for Branch Circuits

PART 2 PRODUCTS

2.01 MAINS, FEEDERS, AND BRANCH CIRCUITS

- A. Circuits 601 to 6000 amperes shall be protected by current limiting BUSSMANN Low-Peak Time-Delay Fuses KRP-C. Fuse links shall be pure silver links (99.9% pure), delay and must hold 500% of rated current for a minimum of 4 seconds, clear 20 times rated current in .01 seconds or less and be listed by Underwriters Laboratories Inc., with an interrupting rating of 200,000 amperes r.m.s.
- B. Circuits 0 to 600 amperes shall be protected by current limiting BUSSMANN LOW-PEAK Dual-Element Fuses LPN-RK (250 volts) or LPS-RK (600 volts). All dual-element fuses shall have separate overload and short-circuit elements. Fuse shall incorporate a spring activated thermal overload element having a 284°F. melting point alloy and shall be independent of the short-circuit clearing chamber. The fuse must hold 500% of rated current for a minimum of 10 seconds and be listed by Underwriters Laboratories, Inc., with an interrupting rating of 200,000 amperes r.m.s. symmetrical. The fuses shall be UL Class RK1 to maintain the Engineered protection of the system components.
- C. Motor Circuits: All individual motor circuits with full load amperes ratings (FLA) of 480 amperes or less shall be protected by BUSSMANN LOW-PEAK Dual-Element Fuses LPN-RK (250 volts) or LPS-RK (600 volts). Larger H.P. motors shall be protected by BUSSMANN Type KRP-C Low-Peak Time-Delay Fuses of the ratings shown on the drawings. All other motors, (such as 1.0 service factor motors) shall be protected by BUSSMANN LOW-PEAK Dual-Element Fuses LPN-RK (250 volts) or LPS-RK (600 volts) installed in ratings of approximately 115% of the motor full load current except as noted above. The fuses shall be UL Class RK1 Dual Element Time Delay or Class L.
- D. Fluorescent fixtures shall be protected by BUSSMANN Fuses GLR or GMF installed in HLR Holder. They shall have individual protection on the line side of the ballast. A fuse and holder shall be mounted within or as part of the fixture. Size and type of fuse to be recommended by the ballast manufacturer.

2.02 SPARE FUSES

- A. Spare fuses shall be provided with a minimum of three of each ampere rating. See Section 26 50 00 for quantities of spare fusing required for ballasted light fixtures.

2.03 ACCEPTABLE MANUFACTURERS

- A. Bussman
- B. Little Fuse

PART 3 EXECUTION

3.01 FUSES

- A. Install in all fusible devices provided under this Contract.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Provided all disconnects, fused and unfused, required by code for equipment furnished under this and other divisions of these specifications and as shown on the drawings.

1.03 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. Fused Disconnect Switches

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. General Electric
- B. Square-D
- C. Siemens
- D. Cutler-Hammer

2.02 DISCONNECTS

- A. Switch shall be heavy-duty type, shall be quick-break and shall be horsepower rated. Switch shall have blades as required to open all ungrounded conductors and shall be single throw unless noted.
- B. Enclosure shall have interlocking cover to prevent opening door when switch is closed. Door interlock shall include a defeating scheme, shall be padlockable in the "Off" position.
- C. Enclosure shall be suitable for environment in which mounted. All exterior enclosures shall have a minimum raintight rating.

2.03 FUSED SWITCHES (OR FUSED DISCONNECTS)

- A. Shall be as above with addition of fuse space and clips to accept only fuses as noted in Section 26 28 13.
- B. Fuses shall be sized in accordance with manufacturer's requirements of protected equipment.

2.04 NAMEPLATES

- A. Provide nameplates on all enclosures and include the following information: Load served, voltage, phase, panel and circuit number. Construct and attach in accordance with Section 26 00 00, Paragraph 2.03.

PART 3 EXECUTION

3.01 SUPPORTS

- A. Secure solidly to wall or approved mounting frame. Disconnects supported only by Raceway are not acceptable.

3.02 SPLICES

- A. Wiring space within enclosure shall not be used as a junction box.

END OF SECTION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions and General Requirements, apply to this work as if specified in this section.

1.02 WORK INCLUDED

- A. Provide the lighting system complete and operational.
- B. Recessed fixtures installed in fire-resistive ceiling construction shall have the same fire rating as the ceiling or shall be provided with fireproofing boxes having materials of the same fire rating as the ceiling.

1.03 FIXTURE SCHEDULE MANUFACTURER'S SERIES NUMBERS

- A. Are a design series reference and do not necessarily represent the number, size, wattage or the type of lamp, ballast or special requirements as specified hereinafter.

1.04 SUBMITTAL REQUIREMENTS OF THIS SECTION

- A. Complete LED Lighting Fixture as listed on Electrical Drawings E0.1 and E2.1.
- B. When substitute fixtures are submitted (if permitted) the data shall clearly cross reference (written or highlighted) that the substitute fixture complies with every detail of the specified fixture. Fixtures not fully complying with contract documents are not permitted.

PART 2 PRODUCTS

2.01 METAL PARTS

- A. Interior Fixtures: Steel or aluminum with 300°F, baked enamel finish, brushed aluminum with baked acrylic clear lacquer finish, or stainless steel with a brushed finish, manufacturer's standard color unless specified otherwise.
- B. Exterior Fixtures: Corrosion resisting metal, a (non-ferrous, stainless steel or special finish) and in all cases suitable for outdoor service without tarnishing or other damage due to exposure; manufacturer's standard colors unless specified otherwise; cadmium plate all metal parts concealed by canopies, including screws, plates and brackets. All exposed fasteners shall be tamperproof.
- C. Recessed Type: Incandescent fixtures shall have housing containing an integral thermal device pursuant to NEC 410-65C.

2.02 LIGHT TRANSMITTING COMPONENTS

- A. Virgin acrylic plastic (0.125-inch thick overall minimum) or glass. Shall be contained in a steel frame hinged and which remains attached to the fixture when door is in open position.

2.03 SPECIAL PARTS

- A. Adapters, Plates, Brackets and Anchors: Provide where required by construction features of the building to suitably mount lighting fixture. All such appurtenances and mounting methods shall be approved by the Engineer prior to fabrication and installation.

2.04 SOLID STATE LIGHTING FIXTURES (LED)

- A. Fixtures shall provide lighting with a minimum Correlated Color temperature (CCT) of 4000K and shall have a Color Rendering Index of (CRI) of 70 or higher. Verify performance of the light producing solid state components by a test report in compliance with the requirements of

IESNA LM 80. Verify performance of the solid-state light fixtures by a test report in compliance with the requirements of IESNA LM 79. Provide lab results by a NVLAP certified laboratory. The light producing solid state components and drivers shall have a life expectancy of 50,000 operating hours while maintaining at least 70% of original illumination level. Provide a complete five-year warranty for fixtures.

2.05 HANGING FOR PENDANT FIXTURES

- A. Rigid type, with not less than 5 thread engagement at each end, consisting of iron pipe, with brass or aluminum tubing casing, or painted tubing not less than 0.040 inches thick.
- B. Provide a canopy for each fixture hanger except where fixture conceals the outlet box directly without a canopy.
- C. Provide a safety chain for all glass pendant fixtures and for all fixtures mounted in gymnasiums.

2.06 EXIT SIGNS

- A. Fronts: Cutout stencils made of minimum #20 gauge sheet steel or sheet aluminum with red glass or plastic back of the cutout. Mount fronts either on concealed hinges or pull-out type with chain catch. Removable cutout arrows shall indicate direction of travel.

PART 3 EXECUTION

3.01 LIGHTING FIXTURES - GENERAL

- A. Size and mounting height from finished floor to bottom of fixture as indicated on the drawings. Verify mounting provisions prior to the ordering of fixtures. Fixtures shall be UL listed for the location, and application in which they are installed.
- B. Ceiling fixtures shall be coordinated with and suitable for installation in, on or from the ceiling as shown. Installation and support of fixtures shall be in accordance with NFPA 70 and manufacturer's recommendations.
- C. Recessed fixtures installed in seismic areas shall be installed utilizing specially designed seismic clips.
- D. Suspended fixtures installed in seismic areas shall have 45% swivel hangers and shall be located with no obstructions within the 45% range in all directions. The stem, canopy and fixture shall be capable of 45% swing.

3.02 DIFFUSERS AND ENCLOSURES

- A. Install lighting fixture diffusers only after construction work, painting and clean up are completed. Prior to final acceptance, remove all lamps, reflectors and diffusers, wash, rinse and reinstall.

3.03 ADJUSTMENT OF FIXTURES

- A. Make all final spotlight and adjustable light settings under the direction of the Engineer during a scheduled period of time prior to the completion of the project. Include costs for all equipment and personnel expenses required for adjustment.
- B. For fixtures with indirect lighting, notify Engineer prior to installation of any circumstance where the fixture lamp source will be within 12" of ceiling.

3.04 SUPPORT OF LED FIXTURES

- A. Recessed Troffer Type: For fixtures supported by the ceiling suspension system, provide integral tabs, which rotate into position after fixture is lifted into the ceiling cavity. Provide two safety chains secured to structural members above suspended ceiling. Circuit connection shall

be through use of 60-inch flexible conduit from a rigidly supported junction box. For plaster or GWB ceilings, provide a plaster frame compatible with light fixture.

- B. Recessed Downlight Type: Mount in frames suitable for the ceiling, with the recessed portion of the fixture securely supported from the ceiling framing. For fixtures supported by a ceiling suspension system, provide two safety chains secured to structural members above suspended ceiling.
- C. Surface and Pendant Mounted Type:
 - 1. Where mounted on accessible ceilings, hang from structural members by means of hanger rods through ceiling or as approved.
 - 2. Where ceiling is of insufficient strength to support weight of lighting fixture, provide additional framing to support as required. Fixtures shall be supported from structure with seismic bracing independent of ceiling.
 - 3. For Pendant Mount Type: Provide a unistrut channel for mounting fixtures entire fixture length unless light fixture is designed specifically for supporting itself. Provide 3/8-inch thread rod secured to structural members for support of unistrut channel.
 - 4. Continuous Runs of Fixtures: Straight when sighting from end to end, regardless of irregularities in the ceiling. Where fixtures are so installed, omit ornamental ends between sections.

3.05 LOCATION

- A. Mount to the dimensions shown on the drawings. Mount at quarter points where no dimensions appear. Engineer shall specify mounting locations where no dimensions appear and quarter point mounting is impractical or not indicated on the drawings.
- B. Refer to details, mechanical drawings, and coordinate with mechanical equipment and ductwork mounted in ceilings to prevent conflict with light fixtures prior to installation.

3.06 FIXTURE TENTING

- A. Contractor shall coordinate ceiling types with architectural drawings and specifications and provide equivalent fire rated enclosures above all light fixtures which penetrate rated ceilings.

END OF SECTION